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BUSINESS ENVIRONMENT**

***SUB-SECTIONS: INTERNATIONAL BUSINESS***



# THE EFFECT OF ILLICIT TRADE IN NARCOTICS ON GLOBAL ECONOMY

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**Abstract:** *Illicit markets especially those dealing with narcotics constitute grievous issues to the world's economies, putting to test global safety, economic progress as well as security and many other aspects. Seemingly, illicit narcotics trade in the last decade – that is 2000 to 2011 underwent a significant boom, resulting from a wide spectrum of illegal drugs such as cocaine as well as heroin among many other hard drugs. In today's global society, several concerns are emerging on the rise of illicit narcotics trade accompanied with organized crime, chiefly as major hindrances to consistent global economic progress. Apparently, some of the effects of illicit narcotics trade are that; this trade gradually turns upside down business rules, opening way for new unruly market players besides reconfiguring influence in global economics as well as politics. Surprisingly, the revenue from illegal drugs in 2011 alone was roughly 10% of the global GDP. Hence, exaggerating local economies' incomes and triggering ceaseless conflicts among market players, while at the same time reducing legal business activities likewise disintegrating socioeconomic conditions. An empirical research method was adopted for this study, analyzing illicit trade in narcotics on the global arena as from 2000 to 2011 and its resultant effects. The research findings indicate that, illegal drugs trade particularly on the world economy besides growing at a high rate, it endangers the overall welfare of humans likewise the business environment. This is ostensibly because this trade has high chances of engrossing regional economies into illegal drugs business activities, causing them to neglect sustainable ethical businesses. Now, to effectively address negative economic issues related to illegal drugs trade, there is apparent need for integrated efforts from local as well as international authorities. Such efforts are chiefly to control not only the harmful effects resulting from the use of illicit narcotics, but also from the trade itself and to build sustainable economies. The findings of this study are crucial for regulatory authorities in the global economy, for them to adequately comprehend the effects of illicit trade in narcotics hence inform their decisions to take necessary measures. This paper is on the effect of illicit trade in narcotics on global economy, touching on issues like peace along with social cohesion as well as security and economic progress.*

**Keywords:** *trade; narcotics; global; illicit; drugs; development.*

**JEL Classification:** *F19*

## **Effect of illicit narcotics trade on global economy**

Illicit narcotics trade as discussed in (Birdsall, 2008: 163-167) is a worldwide illegal market sector that is also described as a black market undertaking. This illegal market chiefly focuses on cultivation along with processing as well as dispersion and sale of medicinal substances that are largely abused by human beings. Further,

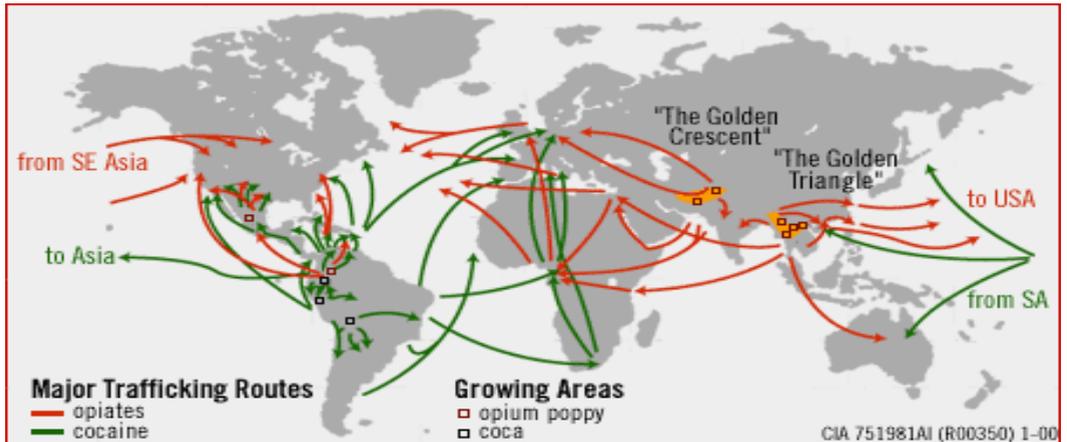
(Ellis, 2009: 171-196) indicates that a number of legal authorities worldwide continue to place strict measures that forbid business transactions for such substances, specifically for prohibited uses. However, their trade is only allowed where valid licenses are obtained from the recognized authorities. Notably, even with issuance of such licenses, it is argued in (Birdsall, 2008: 163-167) that still illicit narcotics trade continue to have far-reaching effects, on top of being a compromising market sector that either directly or indirectly alters the global economy's economic framework. This paper analyses the effects of illicit trade in narcotics, chiefly to establish its impact on the global economy. The research plan involves the analysis of empirical data on the research topic, specifically as from 2000 to 2011.

The history of illegal narcotics began as earlier as during the 19<sup>th</sup> century, with opium being the main as well as popular substance of discussion then. At that time, opium was widely traded among the British as well as Chinese merchants among other traders, enabling them make lucrative returns. In those times, this business' resultant effects included a rise in addiction cases among the Chinese people. As for the British merchants and the other traders, they got quick access to huge chunks of money from China, mainly as a form of compensation (Storti and Grauwe, 2011: 23-45). In the 21<sup>st</sup> century, since illegal drugs trade cause injection into different world economies secretive amounts of money that in turn is used to execute undesirable acts such as terrorism and even wars among others continues to receive criticisms. Also, with changes of time, more drugs such as heroin accompanied with cocaine among many others have made to the list of illicit narcotics trade (Jenner, 2011: 901-927).

**On average**, the global economy as discussed in (Ellis, 2009: 26-35) has developed at a faster rate, where these developments are from a range of factors such as expansion of upcoming economies inclusive of India, Eastern Europe along with China among many other upcoming economies. It has also emerged that, with development of the world economy is the widespread of social ills, the likes of illicit narcotics transactions that have widely penetrated in the international market scene. For instance, ***in the recent past as discussed in*** (Jenner, 2011: 901-927), ***there has been massive rise in illicit drugs trade for example of cocaine along with heroin among many others, characterised by extensive drugs networks together with dangerous criminal groups. Today, as illicit narcotics trade continues to gain ground in world economies, the major worrying issues are that the extent as well as geographical coverage of such illegal activities has no precedent. Also, the other alarming issue touches on unaccounted for income, where for instance in 2009 alone the overall amount of money got from trade in illegal narcotics was roughly US \$ 1.25 Trillion that up to now is yet to be accounted for*** (Hubschle, 2011: 25-40).

Moreover, Illicit narcotics trade as discussed in (Hubschle, 2011, p.25-40) is not a new subject not only within domestic economies but also in the global arena.

**Moreover, the** (UNODCCP, 1999: 51-55) indicates that illicit drugs trade derives its shape courtesy of numerous factors including historical aspects, location and population as well as reigning economic circumstances, hence few countries are least affected by this trade. Therefore, illicit drugs trade unavoidably stretches into every aspect of the global society. The figure below is an indicator of the Drug connections on the international scene.



**Figure 1: Drug connections on the international scene**  
**Source: (Hubschle, 2011: 28).**

Nations with strict measures on illicit narcotics to a large extent have been greatly hit by such measures; this is following the high rate at which such measures are breached. Equally, those local economies on the receiving end such as Ecuador have been hardly hit by issues arising from drug prohibition and its trade (Hubschle, 2011: 25-40). In the contemporary world, the business scene is that of integration, where legitimate businesses are established using illegal activities funds such as illicit narcotics trade. This is the situation where, the gains realized from trade in illicit narcotics for substances such as cocaine as well as opium are utilized by transnational criminal groups to diffuse, contaminate as well as disrupt the well functioning of power structures likewise the economy at large (Sherman, 2010: 7-15). Also, illicit drugs trade are associated with the armed differences worldwide, such as in some West African States, where civil wars have been directly or indirectly linked to illegal drugs trade for instance in Angola among many other nations worldwide (Birdsall, 2008: 203-229).

Often, with probable financial challenges within various economies, such situations create more openings for those who rely on the formal economy, basically to take part in illegal economic activities, ostensibly to settle losses incurred during periods of financial difficulties (Storti and Grauwe, 2011: 23- 45). The fact is that, illicit drugs trade is highly profitable, besides being hard to keep under surveillance for purposes of market regulation. Again, with its' widespread reach as well as its' effects that are largely downplayed, its role in each economy on the global front especially on supplier nations along with transitory nations does not garner the attention it deserves (Jenner, 2011: 901-927).

As of 2010 (Scott and Marshall, 1998: 34-67) indicates that drug seizures had declined a great deal owing to the extensive media focus on issues to do with illicit narcotics trade. This was also supported by the well orchestrated actions of nations in different parts of the world likewise concerned international bodies, for instance

the United Nations office (UNODC) that is charged with the responsibility of dealing with drugs as well as crime. Even so, the fall in captures of illegal drugs do not imply that such transactions have significantly dropped; this only indicates that illicit narcotics cartels along with contrabandists have turned out more advanced in their techniques and ways of transporting likewise of selling them. Furthermore, in relation to drugs seizures (Jenner, 2011: 901-927) reports that most of the trade routes together with transportation techniques of illicit narcotics have been greatly repositioned. This is evident to the hardihood as well as advancement of parties to this trade, besides the resilience of the illegal drug cartels in evading being caught (Storti and Grauwe, 2011: 23- 45).

Lately it has come out that local players along with criminal connections are taking over more elaborate systems, to secretly trade in illicit narcotics. This take over is a denotation of how the illegal trade is well linked in the international economy. As such connections have enabled parties into the illicit narcotics trade to be way ahead of the organizations dealing with drug crimes as well as global efforts to eradicate this trade (Scott and Marshall, 1998: 34-67).

As pointed out in (Mamdani, 2004: 12-23), some of the well-known illicit narcotics often traded in the global market include the following; top on the list cocaine, which mainly comes from Colombia as well as Bolivia and is exported to other parts all over the world. The second drug is cannabis, which is also widely available as well as traded because of its medicinal value besides its recreational use. This drug is allowed in economies like Canada, yet also prohibited in other countries because of its negative effects. The third drug most traded in the global scene is tobacco that despite being legally allowed for use by adults, it is highly taxed pushing it to the black market, where users are able to purchase it at relatively low prices (Hubschle, 2011: 25-40).

The third illicit drug as discussed in (Jenner, 2011: 901-927) is heroin, which is mainly from Mexico along with Southeast Asia region, and has more attractive sales returns when compared with most of the other illicit narcotics. Fourth is methamphetamine along with Temazepam, both of which are mostly prepared in laboratories among many other techniques. On average, in the global economy there are more than four hard drugs that are highly profitable to traffickers, and though illegal continue to make it to various regions of the world to meet the addiction needs of their users. Generally, some of the means employed to transport these drugs include air transport like use of cargo planes and water transport using container ships besides use of human agents either through agreement or at times through coercion. This is mainly done through coordinated efforts of political leaders from various countries around the world (Scott and Marshall, 1998: 34-67).

### **Effects of Illicit Drugs Trade**

The illegal narcotics business undeniably according to (Ellis, 2009: 26-35) is one of the biggest black market sectors in the global arena, with its high profit returns; hence it comes very close to the legal emerging economies just like in Latin America. Unfortunately, Latin America is susceptible to extensive capital flight, majorly because of its highly forceful entrepreneurs coupled with the drug barons and many others. For the most part, as a result of trade in illicit narcotics, the global economy continues to face numerous challenges resulting from ceaseless chaos of masterminded drug crimes, where those mafias collect government revenues like taxes for their own selfish interests (Mamdani, 2004: 12-23).

In reality, there are a range of effects inherent in illicit narcotics trade on the global economy, effects that touch on crucial economic factors linked to production as well as consumption and distribution such as labor force besides security among others (Hubschle, 2011: 25-40). The illicit narcotics trade as pointed out in (Jenner, 2011: 901-927) has developed to a level that is sabotaging the main economic framework. This implies that, this black market of illicit narcotics is endangering the extent at which the global economy is developing.

The first effect is that, trade in narcotics coupled with their use leads to destruction of human capital, and even worse the society's well functioning (Ellis, 2009: 26-35). In other words, trade in illicit narcotics coupled with their abuse as discussed in (Storti and Grauwe, 2011: 23- 45) in the long run causes falling apart as well as disorganization of social set ups. This happens quite often to economies that largely rely on such illegal activities. Acts that without doubt trigger the disentangling of its people and society values, values that are necessary for not only survival but also social likewise economic cohesion. Apparently, once the individuals in an economy become weak, particularly from use of illegal drugs, there are high chances that insecurity issues will result in the global economy, following the dependency and poverty levels and even crimes among many other social issues. Such kind of insecurity trends are aggravated by negative effects of illegal drugs trading accompanied with drug use (Scott and Marshall, 1998: 34-67).

The second effect is that, in illicit narcotics trade passing illegal drugs via a country implies that most of it is retained within that economy. Such drugs are possibly dispensed as a settlement for the services offered or as a point of profit for the local agents, the impact being more usage of such drugs hence paralyzing several economies and wider distribution channels. The third effect is that, with illegal drugs trade the desire to get education is overwhelmed by the mindset of individuals wanting to acquire wealth within a short period, especially among the young population (Mamdani, 2004: 12-23). Such a situation in turn affects the global economy by lowering quality of the workforce, and ultimately employee productivity levels. Also, the moneymaking chances, power and high returns linked to illegal drugs trade turns out more appealing to marginalized groups like the youth, distracting them from acquiring crucial working skills. In that way, the skilled workforce reduces and those available can only carry out less production activities which in turn affects overall global productivity (Jenner, 2011: 901-927).

Fourthly, illicit narcotics leads to a rising number of unskilled and unproductive as well as unemployed people in an economy who are most likely to abuse the illegal narcotics themselves, hence enlarging the drug use practices in an economy. This also takes place as some of the drugs are linked to health issues the spread of other infectious diseases such as HIV mainly through sharing of injections (Scott and Marshall, 1998: 34-67). On the other hand, in the global economy, drug crimes encompass a wide range of underground activities inclusive of human and dangerous weapons trade. The kind of underground activities that in one way or another curtail the progress of world economies, as they subvert governing standards, human rights and overall health. With such effects, illegal drugs trade act as a kind of a destabilizing power more so for fragile developing economies (Ellis, 2009: 26-35).

Additionally, the high amount of foreign exchange as a result of illegal drugs trade revenues can cause currency overvaluation likewise loss of competitiveness for exports and domestic production, which competes with imports among much other

disorganization in business operations (Mamdani, 2004:12-23). Moreover, illicit narcotics trade leads to a declining as well as sabotaged work force, besides influencing formation of a divided legal structure. Also, illegal drugs trade forms a good ground for constant violence among members of the society, where organized criminal activities accompanied with corruption creates a risky business environment. Likewise, with illegal drugs trade there is a ***potential of having slow economic progress as people's behaviours change drifting from performing productive economic activities to non productive ones. This situation has high chances increasing the cost of operating a formal economy, especially if there are high cases of*** incarceration as well as homicide among many others (Jenner, 2011: 901-927).

***Furthermore, if illegal drugs revenue tends to be concentrated in particular economies of the world, this has caused unequal development of regions. This is the case as the illicit trade in narcotics induces*** regional booms as well as busts that possibly hurt the global economy (Mamdani, 2004:12-23). ***In a way, this illegal drugs trade encourages money laundering, an act which exaggerates consumption along with trading patterns as drug dealers and their partners utilise money gained from such activities to invest in other sectors of the global economy like real estate and capital intensive ventures. Also, illegal drugs markets create a massive number of jobs for societies particularly for the suppliers and sellers, increasing income expectations for the local economies*** (Scott and Marshall, 1998: 34-67).

Apparently, most money laundering activities linked to illicit drugs trade take place not only in offshore, but also involving professionals such as accountants and many others. Taking the case of Guinea - Bissau, security officers are used to execute most of the illicit narcotics businesses, especially transportation (Mamdani, 2004:12-23). Indicatively, the illegal drug business transactions according to (Jenner, 2011: 901-927) are taking away the economies' commitment to boost legitimate operations. Which can be translated as foreclose for the growth of normal economic organizations as illegal drugs trade weakens political as well as social institutions. Undeniably, the detrimental economic effects of illicit narcotics trade are far much than the direct costs for rebuilding the destruction emerging from this trade. This takes into account the escalating expenses for medical as well as policing and social costs. This basically extends to the disintegration of efficacious operation of the global economy, causing the expenditure on crime prevention to turn out as a form of tax (Jenner, 2011: 901-927). Furthermore, illicit narcotics just like lawful alcohol, either directly or indirectly degrade the essence of the labor force. The policing issues emerging on the global economy from narcotics trade is that, much more resources are directed towards other expensive miscellaneous expenses, resources which could otherwise be utilized for other more productive uses (Scott and Marshall, 1998: 34-67).

## **Conclusion**

From the above discussion, it has emerged that the scope as well as scale of illicit drugs trade has made most of the international organizations and law keeping agencies to get concerned on the possibility of illicit narcotics trade getting out of hand. Generally, the presence of illegal drugs is apparent in the modern society, with players in the illegal drugs sectors turning out more powerful than a number of

government agencies considering the numerous amounts of money they derive from such transactions. Some of the major effects of illegal drugs trade which impact the global economy are related to profits made from such activities along with the possibility of violence and their destructive effects on people's health. In the event that such situations arise in the global business environment, such conditions have high probabilities of discouraging economic progress. Hence a need for various economies to join efforts to establish a favorable global political likewise economic environment, that promotes economic progress. More importantly, to effectively address negative economic issues linked to illegal drugs trade, there is apparent need for integrated efforts from various players in the global economy. Such efforts are chiefly to minimize not only the harmful effects resulting from the use of illicit narcotics, but also from the trade itself and to build sustainable economies.

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# WEAK EFFICIENCY AND LINEAR REGRESSION OF CENTRAL AND EASTERN EUROPEAN MARKETS

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**Abstract:** *The deepening of financial integration in the EU has accelerated in the last decade. The expansion of trade relations, intensification of investment flows and capital market development evidence strengthening of financial integration processes. Particularly, the large number of foreign companies listed on domestic equity market enhances financial integration. In this regard, the enlargement of stock markets of Central and Eastern European (CEE) countries and efficient capital allocation define further integration prospects.*

*The stock market efficiency depends mainly on adequate pricing of capital and risk. The rational investment expectations and information efficiency positively impact trading strategies and eliminates the presence of undervalued and overvalued assets. This leads to the high competitiveness of stock market and decreases the likelihood of abnormal profits.*

*Studies of stock market efficiency of CEE countries and the correlations of CEE capital markets with Western European markets have a significant importance owing to the ongoing financial integration and impact of financial crisis. I run two tests to check the capital market efficiency of CEE countries taking into account the perspectives of CEE countries to enter the euro area.*

*The aim of this quantitative empirical research is twofold: first, it investigates the weak form of market efficiency for the period from 2<sup>nd</sup> of September 2005 to 31<sup>st</sup> of August 2011 by using the Augmented Dickey-Fuller and Kwiatkowski-Phillips-Schmidt-Shin unit root procedures. Second, it checks the existence of linear correlation between CEE countries and Western European markets.*

*The results assume that the stock markets of some CEE countries follow a unit root. The linear regression model evidences different correlation patterns between CEE and EU old capital markets.*

*Those findings can be used for deeper investigation of market efficiency by highlighting convergence processes of CEE countries with EU old member states. Also effective capital allocation channels, institutional foundations of markets and strengthening of corporate governance should be highlighted. Finally, the outcomes of my paper will be useful for researchers in the field of finance.*

**Keywords:** *stock markets; unit root; random walk; market efficiency; stock returns*

**JEL classification:** *G10; G14*

## **Introduction**

The financial integration of CEE markets fosters the strengthening of information efficiency in these markets. This factor improves the risk-sharing and diversification of capital. In other words, market efficiency shows the degree of development of equity market assuming effective asset allocation, pricing and good governance. In market efficiency environment investors have an opportunity to largely diversify their

funds. Market efficiency fosters effective investment decisions in real economy which support an economic development of country. Basse (2010) assumes that under conditions of market inefficiencies, designing (high cost) sophisticated trading rules based on publicly available information will systematically yield significantly positive abnormal returns to investors.

Following section covers empirical methodology. I discussed in detail the Augmented Dickey-Fuller and Kwiatkowski-Phillips-Schmidt-Shin tests. The third section reports the results of study. The last section concludes.

I emphasize the findings of other authors. In particular, Rockinger and Urga (2000) show that both Czech and Hungarian stock returns were mostly correlated with German market movements. Nivet (1997) supposes that the Polish stock market do not follow a random walk. A similar study was carried out by Divis and Tepy (2006) for testing the random walk hypothesis for CEE markets. They assume that Hungarian, Polish, Czech and Slovakian stock markets show a random walk. Ratkovicova (1999) approves the strong correlation of Hungarian stock prices with DAX. Besides, the reported results assume the presence of unit root of Hungarian, Polish and Slovakian indices except for the Czech index. Hasanov and Omay (2007) find that stock prices of Bulgarian, Czech, Hungarian, Polish, Romanian and Slovakian markets show a weak form efficiency. Those authors also indicate that nonlinear unit root test results assume the acceptance of unit root test at conventional levels for the Bulgarian, Czech, Slovakian and Hungarian stock prices. The ADF test conducted by Omay and Karadagli (2012) indicate that Bulgarian, Hungarian, Russian, Polish, Slovenian and Romanian stock price series follow unit root.

### **Empirical Methodology**

Any sequence that contains one or more characteristic roots that are equal to one is called a unit root process. The simplest model that may contain a unit root is the AR(1) model.

Ssekuma (2011) thinks over the autoregressive process of order one as:

$$Y_t = \varnothing Y_{t-1} + \varepsilon_t \quad (1)$$

where  $\varepsilon_t$  denotes a serially uncorrelated white noise error term with a mean of zero and a constant variance.

If  $\varnothing=1$ , equation (1) becomes a random walk without drift model that is, a nonstationary process. When this happens, we face what is known as the unit root problem. This means that we are faced with a situation of nonstationarity in the series. As Ssekuma (2011) finds that if  $\varnothing<1$ , then the series  $Y_t$  is stationary. On the other hand, Yule (1989) supposes that the stationarity of the series is important because correlation could persist in nonstationary time series even if the sample is very large and may result in what is called spurious (or nonsense) regression.

The presence of serial correlation in the residuals of the Dickey-Fuller test biases the results. For that reason the ADF test was developed. The idea is to include enough lagged dependent variables to rid the residuals of serial correlation (Mahadeva and Robinson, 2004). The basic idea behind the augmented Dickey-Fuller (ADF) test for nonstationarity is to simply regress  $Y_t$  on its (one period) lagged value  $Y_{t-1}$  and find out if the estimated  $\varnothing$  is statistically equal to 1 or not. Equation (1) can be manipulated by subtracting  $Y_{t-1}$  from both sides to obtain (Ssekuma, 2011):

$$Y_t - Y_{t-1} = (\delta - 1) Y_{t-1} + \varepsilon_t \quad (2)$$

which can be written as:

$$\Delta Y_t = \delta Y_{t-1} + \varepsilon_t \quad (3)$$

where  $\delta = (\delta - 1)$ , and  $\Delta$  is the first difference operator.

In practice, instead of estimating equation (1), we shall estimate equation (3) and test for the null hypothesis of  $\delta = 0$  against the alternative of  $\delta \neq 0$ . If  $\delta = 0$ , then  $\delta \neq 1$ , meaning that we have a unit root problem and the series under consideration is nonstationary (Ssekuma, 2011). Erdogdu (2007) assumes that under the null hypothesis  $\delta = 0$ , the t-value of the estimated coefficient of  $Y_{t-1}$  does not follow the t-distribution even in large samples. This means that the t-value does not have an asymptotic normal distribution. The decision to reject the null hypothesis of  $\delta = 0$  is based on the Dickey-Fuller (DF) critical values of the  $\tau$  (tau) statistic. The DF test is based on an assumption that the errors of term  $\varepsilon_t$  are uncorrelated (Ssekuma, 2011). Syczewska (2010) indicates that the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test has a null of stationarity of a series around either mean or a linear trend; and the alternative assumes that a series is non-stationary due to presence of a unit root. Moreover, in the KPSS model, series of observations is represented as a sum of three components: deterministic trend, a random walk and a stationary error term. The model has the following form (Syczewska, 2010):

$$\begin{aligned} y_t &= \xi t + r_t + \varepsilon_t \\ r_t &= r_{t-1} + u_t \end{aligned} \quad (4)$$

where  $y_t$ ,  $t=1,2,\dots,T$  denotes series of observations of variable of interest,  $t$  – deterministic trend,  $r_t$  – random walk process,  $\varepsilon_t$  – error term of the first equation, by assumption is stationary,  $u_t$  denotes an error term of second equation.

Syczewska (2010) shows that the null hypothesis of stationarity is equivalent to the assumption that the variance  $\sigma_u^2$  of the random walk process  $r_t$  in equation (4), equals zero. In case when  $\xi=0$ , the null means that  $y_t$  is stationary around  $r_0$ . If  $\xi \neq 0$ , then the null means that  $y_t$  is stationary around a linear trend. If the variance  $\sigma_u^2$  is greater than zero, then  $y_t$  is non-stationary (as sum of a trend and random walk), due to presence of a unit root.

Syczewska (2010) subtracts  $y_t$  from both sides of the first equation in equation (4) and obtain:

$$\Delta y_t = \xi + u_t + \Delta \varepsilon_t = \xi + w_t$$

where  $w_t$ , due to assumption that  $\varepsilon_t$ , and  $u_t$ , are independently distributed random variables, is generated by an autoregressive process AR(1) (Kwiatkowski et al., 1992):  $w_t = v_t + \theta v_{t-1}$ . Hence Syczewska (2010) mentions that the KPSS model may be expressed in the following form:

$$y_t = \xi + \beta y_{t-1} + w_t$$

$$w_t = v_t + \theta v_{t-1}, \beta=1$$

According to Tranmer and Elliot (2008), the multiple linear regression represents  $p$  explanatory variables, and the relationship between the dependent variable and the explanatory variables is represented by the following equation:

$$y_i = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \dots + \beta_p x_{pi} + \varepsilon_i$$

where  $\beta_0$  is the constant term and  $\beta_1$  to  $\beta_p$  are the coefficients relating the  $p$  explanatory variables to the variables of interest.

I emphasize the main characteristics of the linear regression model. The latter includes (Nathans et al., 2012):

- The correlation coefficient reflects both the magnitude and direction of the relationship between two independent variables. If a correlation coefficient is negative, the value of the variables that are correlated are inversely related; as one variable's scores increase the other variable's scores decrease. If a correlation coefficient is positive, an increase (or decrease) in one variable is related to an increase (or decrease) in the other variable in the coefficient.
- The closer the value of the correlation coefficient is an absolute value of 1.0, the larger the magnitude of the relationship is between the two variables. If the value of the correlation coefficient is zero, there is no relationship between the two variables.
- It is important to note that the strength/magnitude of a correlational relationship is not related to the sign of the correlation coefficient; thus, equivalent predictive power can be attributed to correlations of equivalent magnitude but different signs.

### Empirical Findings

In this study I use stock market data (from 2<sup>nd</sup> of September 2005 to 31<sup>st</sup> of August 2011) of CEE countries and EU old member states. Particularly, I examined the ADF and KPSS tests for Bulgarian (SOFIX), Hungarian (BUX), Polish (WIG), Romanian (BET) stock markets.

The results of ADF and KPSS tests for CEE stock market returns are shown in tables 1-8. As can be seen the null hypothesis of random walk is accepted for BET, WIG and BUX stock indices. I reject the null hypothesis for SOFIX.

I find different correlation patterns between the old and new stock markets of the EU (Table 9). In particular, some of CEE markets are negatively correlated with EU old capital markets. This mainly refers to BUX and BET. BET is in negative relationship with CAC40, DAX and IBEX. WIG and SOFIX are not correlated with most of developed markets.

### Conclusion

This paper investigates the random walk hypothesis of CEE stock markets by using the Augmented Dickey-Fuller (ADF) and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) tests. Besides, we checked linear regression between CEE and EU old member countries' markets.

From the ADF and KPSS tests I get mixed results. Particularly, BET, WIG and BUX follow a random walk hence these markets are weak efficient. The null hypothesis of random walk is rejected for SOFIX.

I assume that CEE markets have different correlation patterns with Western European markets. The CEE markets are negatively correlated or not correlated with European developed markets.

The outcomes of my study can be summarized as follows: Romanian, Polish and Hungarian stock returns follow a random walk according to the ADF and KPSS tests and WIG, BET, BUX and SOFIX are not positively correlated with European developed markets.

I find that the deepening of capital markets assumes a high transparency of market information and robust relations between market players. In this regard, the information efficiency depends on several factors. Particularly, the introduction of new trading platforms and systems enhances the efficiency of firm-level and market-level efficiency of firm-level and market-level information. By contrast, restrictions imposed on short sales and price limits hinder information efficiency. Market efficiency is also conditioned by the relationships of managers and investors. Thus, the intention of managers disclose or not firm-specific information impacts credibility of investors.

In general, it appears that the weak efficiency of Polish, Romanian and Hungarian equity markets is conditioned by good supporting institutions and governance and developing investor protection regulation and increasing transparency. On the contrary, the capital market infrastructure of Bulgaria seems to be underdeveloped which undermines the stock market efficiency.

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**Table 1 ADF test for BET**

Null Hypothesis: CLOSE has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic-based on SIC, maxlag=22)

	t-Statistic	Prob*
Augmented Dickey-Fuller test statistic	-0.952309	0.7716
Test critical values: 1% level	-3.435279	
5% level	-2.863604	
10% level	-2.567919	

\*MacKinnon (1996) one-sided p-values

**Table 2 KPSS test for BET**

Null Hypothesis: CLOSE is stationary

Exogenous: Constant

Bandwidth: 1.27e+003 (Andrews automatic) using Quadratic Spectral kernel

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.7022
Asymptotic critical values*: 1% level	0.739
5% level	0.463
10% level	0.347
Residual variance (no correction)	415165
HAC corrected variance (Quadratic Spectral kernel)	3.48E+08

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table1)

**Table 3 ADF test for WIG**

Null Hypothesis: CLOSE has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic-based on SIC, maxlag=22)

	t-Statistic	Prob*
Augmented Dickey-Fuller test statistic	-1.537833	0.5142
Test critical values: 1% level	-3.435279	
5% level	-2.863604	
10% level	-2.567919	

\*MacKinnon (1996) one-sided p-values

**Table 4 KPSS test for WIG**

Null Hypothesis: CLOSE is stationary

Exogenous: Constant

Bandwidth: 653 (Andrews automatic) using Quadratic Spectral kernel

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.290164
Asymptotic critical values*: 1% level	0.739
5% level	0.463
10% level	0.347
Residual variance (no correction)	322851.9
HAC corrected variance (Quadratic Spectral kernel)	4.21E+07

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table1)

**Table 5 ADF test for BUX**

Null Hypothesis: CLOSE has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic-based on SIC, maxlag=22)

	t-Statistic	Prob*
Augmented Dickey-Fuller test statistic	-1.649759	0.4567
Test critical values: 1% level	-3.435279	
5% level	-2.863604	
10% level	-2.567919	

\*MacKinnon (1996) one-sided p-values

**Table 6 KPSS test for BUX**

Null Hypothesis: CLOSE is stationary

Exogenous: Constant

Bandwidth: 551 (Andrews automatic) using Quadratic Spectral kernel

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.251372
Asymptotic critical values*: 1% level	0.739
5% level	0.463
10% level	0.347
Residual variance (no correction)	1585617 0
HAC corrected variance (Quadratic Spectral kernel)	1.13E+09

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table1)

**Table 7** **ADF test for SOFIX**

Null Hypothesis: CLOSE has a unit root

Exogenous: Constant

Lag Length: 3 (Automatic-based on SIC, maxlag=22)

	t-Statistic	Prob*
Augmented Dickey-Fuller test statistic	-0.437986	0.9002
Test critical values: 1% level	-3.435291	
5% level	-2.86361	
10% level	-2.567922	

\*MacKinnon (1996) one-sided p-values

**Table 8** **KPSS test for SOFIX**

Null Hypothesis: CLOSE is stationary

Exogenous: Constant

Bandwidth: 7.77e+003 (Andrews automatic) using Quadratic Spectral kernel

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	20.9764
Asymptotic critical values*: 1% level	0.739
5% level	0.463
10% level	0.347
Residual variance (no correction)	204476
HAC corrected variance (Quadratic Spectral kernel)	6.96E+0 5

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

**Table 9** **Linear regression (full simple)**

Dependent variables	Independent variables	CAC 40	DAX	IBEX	FTSE 100	FTSE MIB	WIG	BUX	BET	SOFIX
CAC40	1		NC	NC	NC	NC	P	NC	N	NC
DAX	2	NC		NC	NC	N	P	N	N	NC
IBEX	3	N	NC		N	NC	N	N	N	P
FTSE100	4	NC	NC	N		NC	NC	NC	NC	N
FTSE MIB	5	P	N	NC	NC		P	N	NC	N
WIG	6	NC	NC	N	NC	NC		NC	NC	NC
BUX	7	NC	N	N	NC	N	P		P	N
BET	8	N	N	N	NC	NC	NC	P		P
SOFIX	9	NC	NC	NC	N	N	NC	N	NC	

Notes: P – positive correlation, N – negative correlation, NC – no correlation

# TECHNICAL AND FUNDAMENTAL ANOMALIES. PARADOXES OF MODERN STOCK EXCHANGE MARKETS

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**Abstract:** *This paper continues the series of researches about the paradoxes of modern stock exchange markets and their impact on the real economy, addressing this time the most important technical anomalies but also fundamental anomalies, which can be observed on the financial markets. As we mentioned in several previous articles, the paradoxes of stock exchanges are related to potential contradictions that arise in relation to a generally accepted truth. A lot of researches in the field of stock market investment focused on finding the answer to the question whether historical prices can be used to predict future prices for listed securities. Complex forecasting methods were created to clarify this aspect. Thus, technical analysis is a method of forecasting the price movements and trends of the market in the future, by studying the market graphs (including here both, the price of the listed instruments and the volume of transactions). The fundamental anomalies refer to the anomalies in trading financial instruments, and to the elements of fundamental analysis. The basic principle of fundamental analysis refers to the fact that the market price of any financial instrument is the result of supply and demand for that instrument. Both the supply and demand that finally determine the price of a financial instrument, are under the influence of various factors. Market's analysts monitor various economic indicators and examine the market reports, to detect changes that may occur in the economy. The fundamental analysis attempts to predict prices and the overall market development by analyzing some economic indicators, political or social factors which are likely to influence the stock exchange prices. Both technical and fundamental anomalies have a major impact on price formation for financial instruments which are traded on stock exchanges, and are able to offer to warned investors higher earnings.*

**Keywords:** *stock market paradox; technical anomalies, fundamental anomalies, trend lines.*

**JEL classification:** *G02; G12; G23;*

## **1. Technical anomalies**

Technical analysis sets its beginnings in the work and theories of Charles Henry Dow, its fundamental principles referring to the fact that:

- Market actions update everything - the price of listed financial instruments seen as the intersection of the supply and demand for such securities reflects through its value the influence of various factors. The purpose for technical analysis is not to identify the factors that influence the price, but only the price movement and its analysis in time.

- The existing configurations - Technical analysis attempts to give models of the evolution of market prices based on historical data, so these configurations offer some probability that certain results can be expected.
- The history tends to repeat itself - graphics configurations proposed by technical analysis tend to repeat over time due to the characteristics of human psychology.

Technical analysis involves besides many advantages also many disadvantages demonstrated in time (Reuters, *Introducere în studiul analizei tehnice*, 2001, p. 22). From the most important positive aspects that technical analysis involves, we can include the followings:

- It can be used for a wide range of financial instruments listed on every market. Hence a very important feature of technical analysis, namely the flexibility. Technical analysis can easily be adapted to different products traded or different types of markets, the principle remains the same.
- Graphical representations of the evolution of equity prices can be realized for different periods: for hours to historical data for decades - this is because of the technology used (computers).
- In time, a development of the instruments that are used in technical analysis could be noticed. We could say that these instruments are innovations of research in this area.
- The data used by technical analysis are historical data, but recent years technology has allowed even the use of real time data to conduct technical analysis (or with a subtle delay).

Of course, the technical analysis involves a series of disadvantages, most important of them being related to:

- Due to the fact that technical analysis is realized by analysts, who are human beings, the subjective factor is not eliminated. In fact, this is the biggest disadvantage of technical analysis, meaning that forecasts based on the data analysis rely heavily on the subjective factor - the way the same data are differently interpreted by various analysts.
- The technical analysis is based on the extrapolation of events and the moving quotations in time. This is a subject of probability theory, the future and upcoming events being unknown to mankind. Technical analysis addresses an issue so long coveted by mankind: knowing the future.
- Regarding the probabilistic nature of the evolutions that technical analysis is studying, we can say that it is concerned with determining the probability of stock market quotations, and not concerned about the certainty that they will come true.
- Information used by technical analysis can be sometimes wrong, or less accurate, which distorts also the result (as forecast).

The main elements technical analysis is based on are: the prices of financial securities, the repeatability of price trends in the market, and the fact the prices tend to enroll in some trends.

The opponents of the results' accuracy obtained using technical analysis bring as an explanation the random walk theory and the theory of confirmed projection. *The random walk theory* was first discussed in the research filed by Jules Regnault, a French broker in 1863. Later, in 1900, the theory has gained new dimensions in terms of the interpretation by Louis Bachelier in his doctoral thesis, then the subject

is approached by Cootner Paul (1964), Burton Malkiel (1973) and Francis Eugene Fama (1965). According to the random walk theory, the future prices of listed financial securities can not be determined or predicted, because they have a random evolution to their intrinsic value. The theory of confirmed projection highlights the subjective interpretation of graphs.

Technical analysis tries, using historical prices and statistics with this regard, to forecast future prices of the listed financial securities. The simplest techniques and trading strategies are based on a classical graphical analysis, which includes the interpretation of straight trend of building configurations or reversibility, the lines of support, the lines of resistance, moving averages or gaps. More complex techniques include in the analysis indicators like: RSI (Relative Strength Index), stochastic oscillators, moving average convergence-divergence or elements of Elliott wave theory, Fibonacci numbers and Gann graphics.

### **1.1. Elements of simple graphical analysis**

The simple graphical analysis involves the analyst interpretation of the trend lines (straight trend), of building configurations or reversibility, the support lines or resistance lines, moving averages or gaps that can be seen or built on financial securities price trends. Their purpose is very clear: to determine the most appropriate moments to sell or to buy securities in the market, at the best price.

**The trend line** is given by consecutive points, the minimum or maximum price of financial securities or the value of a stock index, its purpose being to identify the direction of market trends or the trend for the price of listed securities. The trend lines are used to identify market direction or the moment of its reversal. If the trend line is supported by a large number of intermediate points, the trend is stronger, and if it entails some interruptions, the signal refers to a possible change of the trend.

**Building configurations** are regular shapes identified in the graphic evolution of securities prices or of the market prices as a whole, in form of triangles, quadrilaterals or flags. These forms are quite difficult to identify and once prices evolve out of the parameters of these forms they give investors entrance and exits signals from the market.

**Configurations of reversibility** indicates the minimum and maximum levels of prices, correlated with the possibility of trend reversal. They are easy to identify if they are based on a strong trend, because at least visually, their identification is easier. The most important reversible formations are: head and shoulders, top and bottoms (maximum and minimum), wedges.

**The support lines and resistance lines** are perhaps the most important technical elements used by technical analysis. The support line of a graph is given by the minimum levels of prices in the market. This can be interpreted as the minimum price where the interest of buyers is strong enough to face selling pressure. Support line has this name due to the fact that the market doesn't fall below it. The support line is adjusted whenever the price falls to a lower level compared to the last value.

The resistance line can be seen in opposition with the support line, it is given by the maximum level prices in the market could reach. Resistance line can be interpreted as the level where selling interest is strong enough to face the pressure of buyers.

**Moving averages** - using moving averages is a method of smoothing the historical data, the purpose of their use being to confirm the price trends. Moving average may take into consideration the price variations for different periods of time as follows: if

the aim is a short-term analysis the data used will be for 9 or 10 days, 18 to 20 days, and if the aim is a long term analysis, it will be taken into account prices on 50,100 or 200 days. The most common used moving averages are simple moving averages (SMA - Simple Moving Average), weighted moving average (WMA - weighted moving average) or exponential moving averages (EMA - exponential moving average). Besides the fact that moving averages confirm the trend, they help investors identify the buying signals and the selling signals in the market.

**Gaps** are graphical configurations which are used to determine and confirm price movements. For example, a gap is formed when the minimum price of a financial instrument in a given period is higher than the highest price of the previous period, or vice versa (Reuters, *Introducere în studiul analizei tehnice*, 2001, p. 116).

### **1.2. Complex elements of technical analysis**

In addition to simple constructions of graphs highlighting the evolution of prices over time, correlated in many cases with trading volumes, technical analysis uses a number of indicators to confirm trading strategies based on graphs. The two main categories of indicators, which refer the technical analysis, are:

- Confirmation indicators or divergence indicators - with their help, the trends can be confirmed, the divergent evolution of the indicator to the price evolution is considered as warning signal. Parts of this type of indicators are the trading volume and moving averages.
- Momentum indicators or oscillators - they measure the frequency of price movements to the price level and are used to establish different trading strategies. Part of this category is the relative strength indicator (RSI), the stochastic oscillator or moving average convergence-divergence (MACD-Moving Average Convergence Divergence)

Without insisting on the method of calculation of these indicators and on the ways this results are use and interpreted, we can say that in time it has been shown that some price evolutions tend to recur. Of course, no graphic format looks exactly the same like another and the accuracy of prediction lies in the eyes of someone who interprets the results and sees that essential required to issue a forecast. Using information from the past (historical prices) method on which the technical analysis is based, is widely used in many other areas. In other words, the future behaviour of a market is also given by its history.

## **2. Fundamental anomalies**

Fundamental anomalies refer to anomalies in trading financial instruments, to elements of fundamental analysis. The basic principle of the fundamental analysis refers to the fact that the market price of any financial instrument is the result of supply and demand for that instrument.

### **2.1. The value**

Seen as a factor of influence in trading financial instruments, their value seems to be the most important anomaly which is commonly used in setting the investment strategy of market actors. Essentially, this anomaly consists on the fact that investors tend to wrongly overestimate the growth prospects for the companies and to underestimate the value of companies. In a work of reference for this anomaly, Lakonishok concluded that "trading strategies that are based on value, offer a high

yield because they take advantage of ordinary investor mistakes, and not because they were fundamentally speaking, more risky" (Lakonishok, Shleifer, & Vishny, 1994).

The issue of value in determining the investment strategy has been addressed by many researchers over time. Thus, (Chan & Lakonishok, 2002) reviewed the literature with respect to performance value due to the growth strategies. The conclusion they arrived to, was that the size of risk is not the result of the fact that differentiated yields are due to higher risk assumed, but rather is due behaviour reasons or transaction costs incurred. We believe therefore that the subjective factor as emotions, temperament or attitude, in this case has an important role in determining the investment strategy.

Supporters of investment strategies based on growth, analyse how the value and its growth are influenced by some factors. Their findings show that growth fund managers have been more successful than managers managing value-based financial instruments.

## **2.2. Low price to book**

Eugene F. Fama and French conducted in 1992 a study on the performance of the financial instruments with low price on the market (Eugene & French, 1992). Their study has focused on the period between 1963 and 1990 and took into account almost all securities listed on NYSE, AMEX and NASDAQ. At the initial stage, securities were divided into 10 groups, which were to be rerouted every year. Yields obtained by the cheapest titles far exceeded the yields obtained by more expensive securities, namely 21.4% in the first case and 8% for the last. The same study reflects the fact that authors divided financial instruments into groups based on beta coefficient, reaching the conclusion that securities with greater value were associated with lower risk compared to the growth ones. Seen from this perspective, the value receive connotations of risk, thus the value is a risk factor for which the investors will be rewarded with an additional return if they will assume it.

Therefore, we can say that paradoxically, securities with lower prices in the market offers the possibility of obtaining higher annual returns than securities more valuable.

## **2.3. Other fundamental anomalies**

Patel, Yao and Barefoot showed in 2006 that financial securities that offer high dividend yields have given better performance (from the perspective of market price) than financial securities offering lower dividends yields (Patel, Yao, & Barefoot 2006).

There are investors who use as an investment strategy the technique "against the market". This means that they will select for their portfolios, securities most neglected on the market (the less traded). The technique was demonstrated in 1970 by Werner DeBondt and Richard Thaler that through a study concluded that the highest performance is achieved by the neglected securities of the market, their yields are higher than the overall average of the market .

## **3. Another anomalies on financial instruments trading**

### **3.1. Size effect**

The size effect was studied for the first time by Banz in 1981, studies he conducted for New York market showed that the profitability achieved by small capitalization

companies is on average higher than the return obtained by large capitalization companies, (Simon, 1997, p 425). Banz divided all the listed shares on the NYSE into five classes according to the market capitalization of the companies and analyzed the evolution of their returns for the period from 1926 to 1980. The conclusion he reached is the fact that yields obtained by the smallest companies (with the smallest market capitalization) were superior to other classes of companies with high market capitalization. Yields obtained by them were even higher than the market average (than the index performance) (Banz, 1981).

The phenomenon has been studied by other researchers: Ibbotson in 1984, Reinganum in 1981 or Lamoureux and Sanger in 1989, these studies refer to securities listed on the American Stock Exchange.

In a 1997 article in Forbes magazine, Mark Hulbert contradicts the so-called myth of small capitalization (small cap myth) considering that there is no advantage for those who choose to invest in the securities of small capitalization companies (Forbes, 2012). Hulbert specifies that the study undertaken by Banz in 1981 did not take into account the transaction costs, which in the case of securities of small capitalization companies can be significant. Also Hulbert believes that the size effect proposed by Banz can not be extended to all world stock markets because the study was conducted exclusively using data from the U.S. stock markets, where small capitalization companies have actually a much higher capitalization than large capitalization companies whose securities are listed on other stock exchanges of the world.

### ***3.2. The effect of announcements on the price***

The announcements effects on prices in the market show that price changes tend to persist even after the initial announcements. Securities for which the announcements made are positive, tend to move upward, and securities for which the announcements are negative, tend to move downward. The essence of this effect is that securities with a consistent growth will grow even more, despite the fact that initial increases were above market expectations. Conversely, if the securities price encounter a steady fall, it will fall further, even if the initial decreases were higher than investors' expectations. The effect of announcements on the price is known as the paradox of high-higher or low-lower.

### ***3.3. IPO's effect on the price***

Numerous studies have concluded that initial public offerings have as an effect a drop in prices on the market, thus achieving poor performance for the companies concerned. The phenomenon is seen as an evidence of market inefficiency by Dharan and Ikenberry. They showed in a study that companies listed on the NYSE and AMEX for the first time (via an initial public offering) obtain lower performance than companies already listed (Dharan & Ikenberry, 1995).

### ***3.4. Insider trading effect***

Transactions made by insiders refer to deals based on inside information. This information has a distinct nature, has not been made public and regards an issuer (company) or certain financial instruments. If this information would be conveyed to the public, it could significantly affect the market value of securities. Trading on such information is an abuse on the market and is sanctioned by supervisors.

On this subject, there are numerous studies referring to the link between transactions carried out by staff of listed companies (company directors, managers or anyone who has access to inside information) and the performance of those securities. In terms of trading on inside information it is considered that if much more such insiders will buy lots of company's shares where they are employed, it is an important signal to all other market participants. In such cases, insiders believe that there is a significant probability that the price of these securities to increase in the future.

## 2. Conclusion

Anomalies in trading financial instruments are associated with the moments when securities prices deviates from their normal behaviour, creating opportunities for those who identify them. These can be viewed from the perspective of time, in which case we can talk about calendar anomalies. From the perspective of interpretations that technical analysis involves, we can talk about technical anomalies, and from the perspective of the interpretations given by the fundamental analysis, we talk about fundamental anomalies.

Technical analysis through which there can be identified technical anomalies, involves interpretation of graphic configurations and price movements and the combining of these formations with the interpretation of some indicators like stochastic oscillator, moving averages, Elliot wave and Fibonacci numbers.

Fundamental anomalies are based on the interpretation of fundamental analysis. Analysts monitor various economic indicators and speculate possible market reversals trends that occur due to changes in the economy.

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## **BUSINESS ETHICS IMPLEMENTATION IN THE ORGANIZATIONAL CULTURE OF COMPANIES**

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**Abstract:** *In this paper we have analysed the perception and implementation of the principles of business ethics for companies.*

*This paper is a theoretical approach to ethical principles and the corresponding legislation, as well as an analysis of the degree of alignment of national legislation with the latest stipulations following the entry into force of the UK Bribery Act. This Act is currently recognized as a new and more comprehensive approach on the subject of ethics in international affairs.*

*At the same time, this paper focuses on the study case regarding the comprisal of Business Ethics principles within the activity of Romanian companies. Therefore, a practical approach is achieved, with an applicability of the theoretical aspects, which are the subject of the first part of this paper.*

*We analysed the need to implement Codes of Ethics and their advantages. Companies that do business with an organization that has implemented a Code of Ethics should be aware of its provisions and act accordingly, because it is a mandatory issue for all employees, and also in its relationships with the external stakeholders.*

*A code of ethics is a tool, a means of transmitting the organizational culture to its members, conferring them a sense of common identity, like the membership of a team. The desire of any company is to improve ethical performance, and, in order to achieve this, they need to build up, day by day, protection and to introduce it into a daily routine activity.*

*Both managers and employees need guidance on how to act in certain situations that raise ethical questions. The best way to solve these situations is through the existence of a code of ethics that both managers and employees can turn to for guidance at any time and reach the right directions.*

*Completed in July 2010 and entering into force in 2011, the UK Bribery Act is the latest approach to corruption. This Act has been described as the toughest anti-corruption legislation in the world, blaming a behavior that is not acceptable in the global market. With the advent of this new law, many companies were forced to update their codes of ethics in order to meet the new challenges introduced by this law. In this context, our research is based on the study case of the way in which the best performing company in Romania, OMV Petrom, uses in its practice the ethical values that are compulsory at an international level.*

**Keywords:** business ethics, UK Bribery Act, sanctions, code of ethics.

**Jel classification:** F23, K42

## 1. Theoretical Background

In recent decades, ethics has been the subject of many debates between academics and practitioners. The discussions are usually focused on the role of business in society and on the question whether if we could approach business from an ethical point of view. Starting from Friedman's approach (Friedman, M. (1970) *The Social Responsibility of Business Is to Increase Its Profits*, New York Times), during the last decades the concept has evolved; now, managers have understood that by embedding ethics into businesses, they can gain a competitive advantage and promote a sustainable development of the company. The new approach of ethics includes the development and implementation of Codes of Ethics.

### 1.1. Business Ethics

According to the Explanatory Dictionary of Romanian language, ethics is defined as "all rules of good conduct that correspond to an ideology of a particular society or organization."(www.DEX.ro).

Business ethics is a system of principles, values, norms and codes of perception and behaviour, based on a business philosophy that requires a moral obligation by inducing their expression.

"*Business ethics* (ethical economics), a particular form of applied ethics, is a set of rules and moral standards aimed at the agents' economic conduct and activity (business), both individually and collectively" (Iamandi, I.E., (2013) *Etică și responsabilitate socială corporativă în afacerile internaționale*, (www.ai.rei.ase.ro suport curs master), and pursues the activities and success in business.

Business ethics was first embraced by in developed countries, like the U.S. and Western European countries, but in the last decade, the countries of Central and Eastern Europe have become more and more interested in this concept. The reasons for which the countries of Central and Eastern Europe have shown interest in this topic can be both social, because there is a direct relationship between the degree of development of a country and the importance that is given in that state to business ethics, and of economic nature - the competitive pressure induced by the increasing number of multinational corporations that have extended their activity in this regions.

U.S. is the country in which Business Ethics has emerged. U.S. has the largest theoretical and practical experience in the promotion of ethical principles. In the twentieth century, numerous papers and institutions which addressed the importance of implementing ethics in companies have appeared. Currently, over 97% of U.S. companies have their own Code of Ethics.

Business Ethics has been implemented as a subject matter (teaching line) in all business universities, thanks to the fact that some teachers and businessmen considered it necessary to impose American values in their business practice, accepted by the wider community.

Business Ethics appeared in Europe in the mid-80s, both as an academic discipline and as a practical field of interest. In the early 90s, it reached an academic maturity thanks to the emergence of numerous courses, publications and periodicals (*Business Ethics Quarterly* in 1991; *Journal of Business Ethics* - in 1992; *Business Ethics: An European Review* - published quarterly since 1992; *Teaching Business Ethics* - in 1997); associations, centres and professional or educational institutions (examples: Institute of Business ethics - United Kingdom; Ética, Economía y

Dirección, Sucursal Española de European Business Ethics Network – Spain; European Institute of Business Ethics – Holland; Institute for Business Ethics – Switzerland). The first European research centre of Business Ethics appeared at the current St. Gallen University in Switzerland, in 1983.

In November 1987, in Brussels, a milestone was reached in the field of European Business Ethics: the First European conference on Business Ethics took place. The countries that participated in the conference were: Holland, Switzerland, England, Norway, France, West Germany and Belgium. At the end of this conference, the foundation of the European network EBEN (European Business Ethical Network) was proposed, with the purpose of stimulating and promoting discussions on various topics related to business ethics in Europe and, also, for promoting the exchange of information and experiences on European Business Ethics. In only two years, the number of EBEN members has increased impressively, so that at the second European conference - held in Barcelona in September 1989 - EBEN members consisted of representatives of seventeen different countries. (Iamandi, I.E., (2013) *Etică și responsabilitate socială corporativă în afacerile internaționale*, (www.ai.rei.ase.ro suport curs master).

In the year 2000 there were over twenty five European headquarters devoted to studying business ethics and many scientists were dealing with this topic. In 2001, EBEN launched the Forum for Ethics Practitioners Program, the European equivalent of the American Association of Ethics Officers. All over Europe, including the UK, conferences are organized, along with seminars and symposiums, both by academic institutions and by professional organizations or corporations. The objective of this Network (between 44 countries) is to promote the principles of corporate Ethics, of corporate governance and Social Responsibility in the academic community, the EU, the public and private sectors, non-profit organizations and civil societies. (www.eben.com).

## **1.2. Codes of Ethics**

A Code of Ethics is a set of norms and values, which aims to guide the behaviour of members inside the organization, in the relationship between themselves and also in their interaction with society in general. A code of ethics is a tool, a means of transmitting the culture of the organization to its members, giving them a sense of common identity, of being part of a unity. Ethical codes are functional to the extent that they are aligned with the business objectives, however, it should be taken into consideration that the economic performance should not be achieved at any cost. The purpose does not justify the means, thus, the code represents a regulatory instrument, and at the same time a tool for mitigation of reputational risk, associated with the company behaviour (as a “cumulous of individuals” personal behaviours). We consider it is important for an organization to have a code to guide the employees’ behaviour; be it written or not, but it should not be confused with legitimate behaviour.

A Code of Ethics is implemented in order to: define acceptable or unacceptable behaviour, promote high standards of good practice, provide members a benchmark for their own evaluation, and establish the framework of professional and responsible behaviour.

According to Samuel Mercier, the Codes of Ethics have the following objectives (Mercier, S. (1999) *L’etique dans les entreprises*, Editions La Decouverte et Syros, Paris):

- Establishing a moral contract between the organization and its beneficiaries, and also between those who belong to the same organization;
- Protecting the organization from dishonest or opportunistic behaviours;
- Promoting a positive image of the organization;
- Providing a means of regulating the adhesion and the commitment of collaborators;
- Creating a sense of belonging to the group; showing the managers' commitment to principles;
- Obtaining a contractual relationship based on trust and accountability;
- Guiding the behaviours in case ethical dilemmas are encountered.

The effective implementation of any code of ethics depends on the company's human resources, both managers and employees.

## **2. UK Bribery Act as a reference point in Business Ethics**

Corruption undermines democracy, as well as laws and is a serious threat to economic progress for developed countries and especially for emerging economies, and it generally prevents free market access.

Thus, in 2010 in the United Kingdom, after decades of reports and draft laws, appears that which would become the most comprehensive and current legislation in the field of bribery, The Bribery Act. *The* notice was received in April 2010 and came into force on the 1<sup>st</sup> of July 2011. The new law repeals all previous articles regarding corruption and replaces them with articles concerning bribery: offering and receiving bribes to and from foreign officials and the failure of a company to avoid acts of corruption.

The UK Bribery Act attempts to respond to these threats by increasing penalties for bribes, from 7 up to 10 years, but it should also be noted that the objective of the law is not to bring a legal threat to companies. This law seeks to bring a balance, because the legislator is aware of the fact that no corruption prevention system can totally stop bribery.

The law's purpose is to encourage commercial organizations to develop internal procedures and regulations that help to prevent bribery.

It can be considered that this law offers a universal jurisdiction, because it allows the prosecution of companies or natural persons that commit acts that are considered offenses to the United Kingdom, no matter where the offenses occur.

This Act has been described as the toughest anti-corruption legislation in the world, blaming a behaviour that is not acceptable in the global market.

### **2.1. Principles that govern the UK Bribery Act**

- The risk evaluation principle: according to this principle, the risk assessment should be a continuous and dynamic process, not a singular action;
- The top engagement: there must be a 0 tolerance policy for bribery and corruption in the organization's culture, this including business partners too;
- Due diligence assumes an accurate evaluation and a proper risk management before getting involved in a business;
- Policies and procedures should be clear, practical and accessible, and specific guides should be compiled for employees and business partners;
- Effective implementation: anti-bribery measures are to be incorporated in the internal control and recruitment processes; the communication of anticorruption policies should be available in many ways;

- **Monitoring and reviewing:** requires a dynamic and transparent audit and financial controls, as well as internal controls for monitoring ethics and compliance procedures; they must be approved and supported by the Administrative Board and subject to periodic external checks. ([www.worldcompliance.com.Libraries/whitepaper/ukbriberyact](http://www.worldcompliance.com/Libraries/whitepaper/ukbriberyact)).

## **2.2. Penalties provided in the UK Bribery Act**

If a subsidiary of an UK parent company commits an act of corruption in the context of performing services for the company in the UK, it falls under the provisions of the Bribery Act. Foreign companies operating in the UK can be prosecuted for a corruption offense, even if the offense occurs outside the company and the benefit or advantage is intended to accumulate outside the UK. An organization may be guilty of corruption when the act is committed by an employee, agent, subsidiary or a third party ([www.transparency.org.uk](http://www.transparency.org.uk), The 2010 Bribery Act, Section 8), the location being irrelevant.

In Section 11 there is a legislated penalty for an offense under the law: a maximum of 10 years of imprisonment, with an unlimited fine, as well as the potential confiscation of assets involved within the offense (this provision was included in the Act of 2002) and the disqualification of managers under the Company Directors Disqualification Act. (1986). The law has an almost universal jurisdiction to allow prosecution of an individual or company with ties by the United Kingdom, no matter where the offense has occurred.

The first penalty imposed under the new legislation took place in 2012. The company Abbot Group Limited has paid a fine of £ 5.6 million, after the company admitted that it had benefited from corrupt practices in 2007. One of the foreign subsidiaries paid bribes in connection with a contract with a foreign company for oil and gas. The contract ended in 2006, and the offense occurred in 2007. The amount of the fine was equal to the profit made by the company thanks to the transaction, £5.6 million. (<http://www.crownoffice.gov.uk>).

## **3. Monitoring Ethics aspects at an international level**

The fact that large companies promote the principles of sustainable development more and more, as a vector of their business success, is nothing new. Such an approach assumes an increase of responsibilities for the promotion of Business Ethics principles and values. Nevertheless, besides these responsibilities that belong to the companies, the instruments that can be used by authorities for monitoring the implementation of Business Ethics principles and for punishing any deviations, are strengthened.

On this basis, any deviation from the principles and ethical values in business are severely punished by the national authorities in order to provide a healthy environment for doing business.

For exemplification, we will show the largest cases of punished acts of corruption, in the last five years, at an international level.

**Table 1:** Fines for the biggest acts of corruption

Nr. Cr.	Company	Country	Fee Amount(mil. dollars)	Year
1.	Siemens	Germany	1600	2008
2.	KBR/Halliburton	USA	579	2009
3.	BAE Systems	USA	448	2010
4.	Snamprogetti	Holland	240	2010
5.	Technip SA	France	240	2010
6.	JGC Corporation	Japan	219	2011
7.	Daimler AG	Germany	195	2010
8.	Alcatel-Lucent	France	137	2011
9.	Panalpina	Switzerland	76	2010
10.	Johnson & Johnson	USA	70	2011
Total			3804	

Source: data gathered from [www.thefiscaltimes.com](http://www.thefiscaltimes.com)

The main aspects that emerge from the situation presented above are:

- The volume of fines given to international large companies has risen very much, reaching figures of billions of Dollars;
- All of these fines were given by American authorities
- The biggest fine was given to the German company Siemens, fact that initiated/ triggered an ample process of defining the Compliance Program at the company's level.

#### 4. Business ethics principles in Romanian companies

##### 4.1 Romanian legal framework

In Romania, the bribery legislation is set out in The Penal Code, Article 254, paragraph 1: "taking bribes" in the legislator's opinion, is: "The official's act of demanding or receiving money or other benefits, directly or indirectly, the claiming or receiving money or of benefits that are not his to claim, in order to perform, not to perform or delay performance of an act concerning of his office duties or in order to do an act contrary to these duties, shall be punished with imprisonment from 3 to 12 years and interdiction of certain rights". "Anyone who commits the act presented in paragraph 1, an official with control duties, shall be punished with imprisonment from 3 to 15 years and interdiction of certain rights. The money, valuables or any other goods that have been gained by taking bribery are to be confiscated and, if they are not found, the offender is obliged to pay their equivalent in money". (<http://legeaz.net/cod-penal-actualizat-2011/art-254-cpen>).

In Article 255 the offense of bribing is defined as "promising, offering or giving money or other benefits", in the ways and for purposes described in Article 254, shall be punished with imprisonment from 6 months to 5 years. The act is provided in the preceding paragraph which is not an offense when the briber was forced by any means by the one who took bribes. (<http://legeaz.net/cod-penal-actualizat-2011/art-255-cpen>).

The Romanian legislator approaches in The Penal Code also the offense of work or related to work, that is "acceptance of undue advantages" (Article 256) and "trading

in influence" (of Article 257). The first offense is punishable by imprisonment, from 6 months up to 5 years, and in the case presented in Article 257, the punishment is imprisonment from 2 to 10 years, and in both cases the money, valuables or other property or benefits gained, shall be confiscated.

When comparing the two laws, the UK Bribery Act and Articles of Romanian Penal Code, we can conclude that both legislations refer to the offense of giving and taking bribes, as well as the maximum penalty for these offenses being, in both cases, 10 years. Analysing both laws in terms of territoriality; we find that the UK law takes effect throughout its territory and also beyond its state borders. Both the Romanian and the British law refer to bribery in private and public activity. The extraterritoriality principle assumes that companies must align their programs and anti-bribery policies to the ones of the companies with which they have business relationships.

#### 4.2 Case studies on companies' practices in Romania

Knowing the Romanian legislation in force and also the international law, in the first phase of the research, we intended to evaluate the way in which the ten most important Romanian companies implemented or not the Code of Business Ethics. We analysed the companies with foreign capital, domestic capital as well as the top ten in terms of turnover in 2012.

The results of this evaluation are given in the table below:

**Table 2:** List of the biggest companies operating in Romania, having or not a Code of Ethics

Crt. no.	Companies with foreign capital	Code of ethics	Companies with Romanian capital	Code of ethics
1.	OMV Petrom	Yes	Romgaz	No
2.	Orange Romania	Yes	Nuclearelectrica	No
3.	Vodafone	Yes	Hidroelectrica	No
4.	BRD	Yes	RCS&RDS	No
5.	BCR	Yes	Aeroporturi București	No
6.	Automobile Dacia	Yes	Interagro	No
7.	Romtelecom	Yes	Electrocentrale București	No
8.	Enel Distribuție Muntenia	Yes	Transilvania Bank	Yes
9.	Kaufland	No	Dedeman	No
10.	E.On Gaz Distribuție	No	Mediplus Exim	No

Source: made by authors based on data from INS and companies' websites.

It can be stated that the companies operating in Romania are becoming more and more responsible when it comes to promote a sustainable development, based on Business Ethics principles and values. We are referring mostly to the companies which have a foreign capital that use a Code of Business Ethics at a rate of 80%. It feels, however, that such ethical values should be promoted by Romanian companies as well (only 10% of such considered companies have this type of an instrument).

In the second phase of the research, we have focused on evaluating the way in which the biggest company in Romania, OMV Petrom, approaches Business Ethics.

For this purpose, we started from the company's undertaken responsibility regarding sustainable development and the promotion of the three main pillars of this concept, that is: economic development, care for the environment and the responsibility for the community in which the company conducts its activity. The study made has shown that this company assumed the responsibility of promoting the Business Ethics values and principles in its relation with its employees, as well as with its stakeholders.

Therefore, implementing a Code of Business Ethics, which is conceived as an instrument of assuring a durable basis for development, is to be noted.

In OMV Petrom's case, the company's management has assumed the principle of zero tolerance for bribery, fraud, theft and other means of corruption in which employees are fostered to admit, prevent and report any abnormality which is related to these acts of corruption. OMV Petrom's Code of Ethics regulates issues like: conflicts of interest, bribery and facilitation payments, offered / received gifts and gratuities regime, competition and anti-trust issues.

It is important to mention that at company's level, it was set-up by a series of instruments, capable of sustaining the efficient implementation of Business Ethics principles, for example: the approval methodology and competencies of gifts, their registries, the provisions' application guideline related to gifts, conflicts of interests, competition practices, etc.

Furthermore, in order to be efficient in implementing the Business Ethics aspect a compliance structure was created for the company, in order to assure, on one hand, the promotion of business ethics culture within the organization and, on the other hand, the relationships with the company's employees and its stakeholders. In order to achieve this, there have been implemented new ways of communication, dedicated to this purpose. In order to increase efficiency against any form of corruption, the company has developed a compliance programme, which intends to identify and mitigate the risks, as well as to avoid fines like the ones mentioned before, for the other companies. It can be concluded, thus, that if there is responsibility, the legal framework and mentality of Romania are in no way a major obstacle for implementing the principles of Business Ethics within companies' activity.

## **Conclusions**

Based on the theoretical and practical aspects included in this paper, a lot of relevant conclusions can be drawn, regarding the implementation of the principles and values of Codes of Business Ethics. At the same time, the growth of companies' responsibilities for sustainable development imposes without doubt the need to combine imminent objectives with those of environmental protection and of developing the relationships with the communities in which they carry out their actions. For this, it is necessary to adopt Codes of Business Ethics which lead to sustainable solutions for business situations the companies are confronted with.

The research has highlighted a few important conclusions, as follows:

- The states' efforts must be enhanced in order to provide a more and more efficient legislation against companies' acts of corruption. Hence, the laws applicable are becoming more strict;
- The increasingly active involvement of authorities in monitoring the existence and implementation of Business Ethics principles in companies;

- The continuous growth of companies' interest and responsibilities for the promotion of clean business practices, which eliminate any doubt regarding ethics;
- The increase of authorities' actions and the elimination of any deviations from Business Ethics norms. The fines given by them in this purpose affect the most important international companies and their amount has reached the level of billions of dollars;
- The discrepancy which is still maintained on the Romanian market, between the Business Ethics practices of companies that have a foreign capital and the companies that have a domestic capital. The first category implements the Codes of Business Ethics at a rate of 80%, while the second one applies such practices only at a rate of 10%;
- The case study based on the practice of OMV Petrom regarding Business Ethics highlights the fact that a responsible company can successfully operate on the Romanian market, given the conditions in which it adopts and implements a Code of Business Ethics, which guarantees the support of sustainable development.

The Romanian legal framework, as well as our mentalities cannot be used as an excuse by responsible companies to lack the promotion of the principles and values of Business Ethics. The study case we completed for OMV Petrom's situation fully demonstrates this conclusion

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## THE ABUSE OF DOMINANT POSITION - RESTRICTING COMPETITION PRACTICE. CASE STUDY: ENI

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**Abstract:** *The abuse of dominant position along with cartel, merger and state aid are practices restricting competition strictly regulated at EU level. These practices can have a disastrous effect on the internal market harming both competition especially consumers. These practices can have a disastrous effect on the domestic market harming both competition and especially consumers. This paper aims to analyze how the abuse of a dominant position is regulated in the European Union. The research methodology used is the study of literature, analysis of legislation, case study, and the collection and interpretation of statistical data. The Competition Law at European level is harmonized among European Union member states. The competition authorities of the EU Member States work together to detect and sanction the practice that is restrictive for competition. Improving legislation that regulates the abuse of dominant position has been an ongoing concern of competition authorities, which is why the EU currently enjoys a very well established procedure. The procedure governing the abuse of dominant position consists of a series of steps that must be taken gradually to have the desired result, i.e. restoring fair competition on a given market. The case study presented in this paper is indicative and shows very clearly the next steps for referral to an abuse of dominant position, with special reference to the outcome arising when applying the procedure correctly. The analysis of statistical data regarding the number of investigations opened and the number of decisions made by competition authorities on abuse of dominant position is relevant, outlining the evolution of the work performed by competition authorities. Throughout the period of ten years analyzed (January 2004 - February 2013) there were 1583 cases of violation of antitrust laws at European level. The percentage of investigations opened by the competition authorities of the Member States is 86%, much higher than the number of investigations opened by the European Commission (14%). Both the activity of the competition authorities and especially the importance of competition policy as well as the guardian position for consumer protection assumed by the Competition Council in each Member State of the European Union have to be underlined.*

**Keywords:** *abuse of dominant position; competition policy; European legislation; procedure; case study*

**JEL classification:** K21; L41

## **1. Regulations on abuse of a dominant position**

The abuse of dominant position was regulated at EU level by Article 82 of the *EC Treaty*, being currently replaced by Article 102 of the *Treaty on the Functioning of the European Union*. In Romania the abuse of dominant position is regulated by Article 6 of Law No. 21 of 2006. The Competition Law in Romania is harmonized with the European legislation.

The competition policy is closely monitored at EU level as anticompetitive practices can have a devastating effect on the domestic market. The dominant position of a company is not prohibited, but the abuse of a dominant position is considered illegal. Article 102 of the *Treaty on the Functioning of the European Union* prohibits the abuse of a dominant position on a market by one or more companies. According to present legislation, abuse of dominant position concerns: the price fixing, limiting production and marketing of products as well as limiting technical progress at the expense of consumers; imposing dissimilar conditions to equivalent transactions among trading partners, conditioning the conclusion of contracts by the existence of some additional benefits (Consolidated versions of the Treaty on the Functioning of the European Union, 2010).

The company or companies that are in a dominant position have a responsibility not to distort competition. If only one company is on a dominant position, we have to do with a unique dominant position, whereas if more undertakings are dominant we talk of collective dominance. Competition authorities consider it necessary to intervene when a company commits an abuse of a dominant position because it not only protects consumers but also competitors. At European level the abuse of a dominant position is defined as the situation where an enterprise has that much economic power that can act independently of both competitors, trading partners, and especially of consumers.

The analysis of the relevant market plays an important role for antitrust practices. Competition authorities are extremely thorough when settling both the relevant product market and the relevant geographic market. In order to clearly define the relevant geographic market from the relevant product market, the competition authorities have to collect a series of information. This information can be already in the possession of authorities or they may be required to companies. Based on the information gathered and applying tests, competition authorities are able to accurately determine the relevant product market and relevant geographic market.

The first issue considered by the European Commission is the market share held by the company in a relevant market. A market share exceeding 40% in the relevant market is a warning; nevertheless the period in which the respective market share is being held should not be neglected. Additionally, the impossibility of some competitors to enter and expand in that market is another signal to the competition authorities. The company holding a dominant position may impede competition to enter and expand in the relevant market through a variety of means: the existence of some contracts with suppliers and customers for very long periods of time, the existence of a very well organised distribution network, privileged access to the raw materials required and the benefits from the existence of economies of scale and possession of the latest technology.

Authorities in the field examine the power of pressure of clients on a certain company in a dominant position, because even if the company has a high market share, but its customers put a pressure that is able to influence the company

behaviour, then the abuse of dominant position of that company is unlikely. In addition to the factors mentioned above, when analysing the abuse of dominant position, the Commission considers a number of specific factors. These factors refer to: low selling prices of products, imposing certain exclusive supply contracts on customers, offering customers conditional discounts on the volume of products or services purchased, tying or bundling of products sold to customers and unjustified refusal to work with new customers.

When facing a possible abuse of a dominant position, European Commission considers both the general factors and the specific ones listed above, comparing them with the normal situation that should exist in a competitive market. The ultimate objective of the competition authorities, in terms of restricting the abuse of a dominant position is to protect competition and consumers in particular, by enabling the latter to choose from a variety of products in the quantities they want and benefiting of the optimal price performance ratio.

## **2. Overview on the Conduct of Proceedings for Abuse of Dominant Position**

At European level the way of conducting proceedings for abuse of dominant position is regulated in the smallest details. In case of abuse of dominant position investigations are opened by the European Commission or the Member States' competition authorities *ex-officio* or following complaints lodged by other companies or individuals. Competition authorities of the EU Member States work closely *with* the European Commission throughout the investigation.

Before opening the investigation, there is an initial assessment. In the initial assessment the information is analyzed and, based on the knowledge available, there are two decisions that can be made: suspend the investigation if the complaint is not justified, because they do not infringe Article 102 or start further investigations and requests for further information. Also, at this stage, the authority in charge with the case is being set. The case can be assigned to the European Commission or the competition authority of a Member State of the European Union. If, following the initial assessment, further investigations is considered necessary, the decision on the opening of proceedings will be issued. This decision is communicated to stakeholders and later published on the website of the Directorate General for Competition, together with a press release.

After issuing the decision to open the proceedings, the competition authorities may require certain information. Requesting information does not only refer to the involved companies, but also to other persons or companies able to provide information relevant to the case. The requested information has a time limit enabling stakeholders to respond in a timely manner.

The communication between the competition authority and the investigated company can be carried out in one of the language acknowledged in the European Union, according to the preferences of the company performing the investigation.

During the investigation stage, there is a series of meetings aimed to help the investigation. During these review meetings, the parties may express their views. Also, during the investigation stage unannounced inspections at the headquarters of the companies involved can take place. Throughout the entire investigation the information is confidential.

The investigation stage may be concluded as follows: the competition authority considers that the allegations are substantiated and the investigation should continue; the parties propose a number of commitments aimed at ending the abuse

of dominant position; the Competition Authority stops the investigation as complaints are unfounded.

In case the investigation continues, stakeholders are heard. Throughout the oral hearings the companies have the opportunity to answer all objections made by the competition authority. This stage may have two results: the competition authority decides that Article 102 of the Treaty on the Functioning of the European Union has been violated, or they may decide to close the case on the grounds that the allegations were unfounded. Before issuing its decision of violation of Article 102, the Advisory Committee is also consulted. By means of this decision the abuse of a dominant position is prohibited.

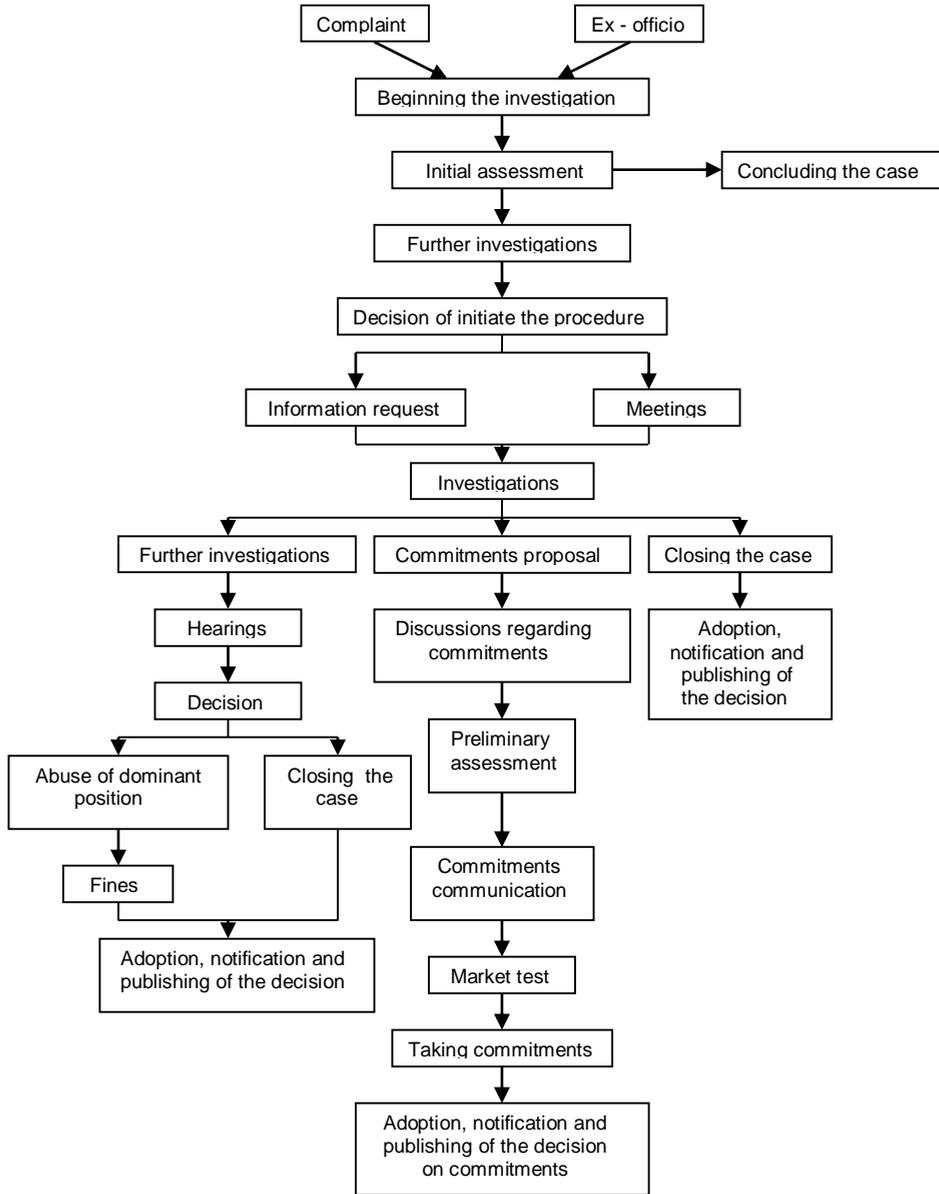
If the abuse of dominance is found, the competition authority may impose a fine of an amount not exceeding 10% of the turnover of the previous financial year. Fines of 1% of the turnover of the previous financial year may apply to companies that do not wish to provide the requested information or provide incomplete information. Also, for each day of delay of information, the competent authority may impose a fine of 5% of the average daily turnover figure of the previous fiscal year (EU Competition Law Rules Applicable to Antitrust Enforcement, 2011).

If the company involved proposes a series of voluntary commitments to restore competition and to stop abuse of dominance, the competition authority should consider the proposals. Thus, the discussions regarding the commitments are initiated, followed by a preliminary evaluation. In the preliminary evaluation stage there is a series of meetings between representatives of the authorities and stakeholders.

This assessment can be completed by formulating certain commitments by the company involved. These commitments must be disclosed and made within one month from the completion of the preliminary assessment. Before these commitments become binding, the competition authority carries out a market test. Depending on the outcome of the market research those commitments become binding or they are improved, in which case the market test should be repeated. After the market testing, the opinion of the Advisory Committee is required, and subsequently the decision on commitments is issued.

The decisions made by the Commission or the competition authorities of the Member States are made public to the interested parties as soon as possible. The decision is made public through a press release and the summary of the decision is published in all official languages of the European Union in the Official Journal of the European Union. The complete decision and the final reports are published on the website of the competence Authorities.

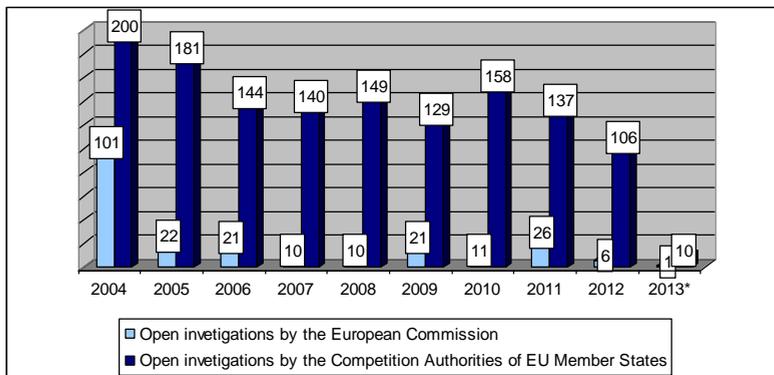
The conduct of the proceedings for abuse of dominant position may be summarized as in the figure below.



**Figure 1: The conduct of the proceedings for abuse of dominant position**  
 Source: made by the author based on data from Commission notice on best practices for the conduct of proceedings concerning Articles 101 and 102 TFEU

### 3. The Evolution of the Investigations and Decisions on Abuse of Dominant Position

In the European Union, between January 2004 and February 2013, a number of 1583 investigations of antitrust cases were opened (violation of Article 101 and Article 102).

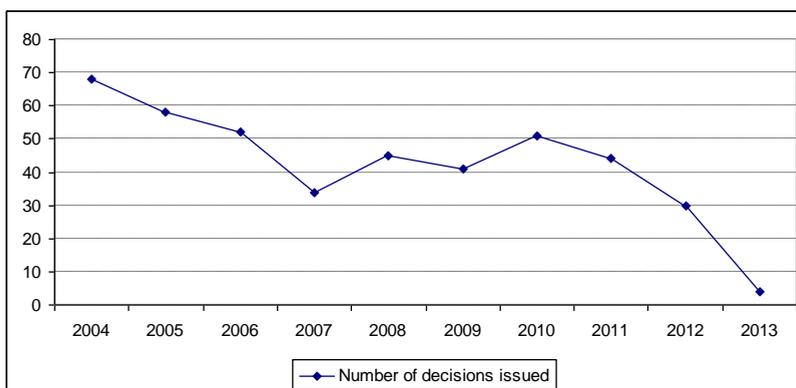


**Chart 1:** Developments in EU antitrust investigations in the period January 2004 - February 2013

Source: made by the author based on data from <http://ec.europa.eu/competition/ecn/statistics.html>

In Chart 1 we can notice the evolution of antitrust investigations opened by both the European Commission and the competition authorities of the Member States. The percentage of antitrust investigations opened by the competition authorities of the Member States (86%) is much higher than the share of the investigations opened by the European Commission (14%).

Most investigations were opened in 2004: 200 initiated by the competition authorities of the Member States, the European Commission initiated 101 respectively.



**Chart 2:** Developments in EU antitrust decisions in the period January 2004 - February 2013

Source: made by the author based on data from <http://ec.europa.eu/competition/ecn/statistics.html>

Analyzing Chart 2 we notice the evolution of antitrust decisions issued in the European Union, between January 2004 and February 2013. Most antitrust decisions were issued in 2004 and the fewest in 2012 (except for 2013 for which data are known only until February).

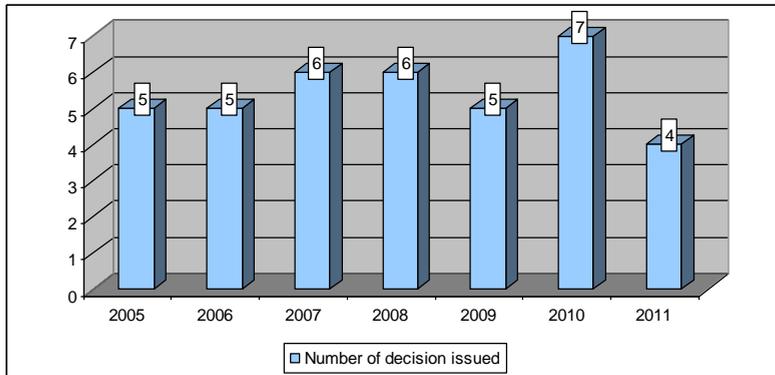
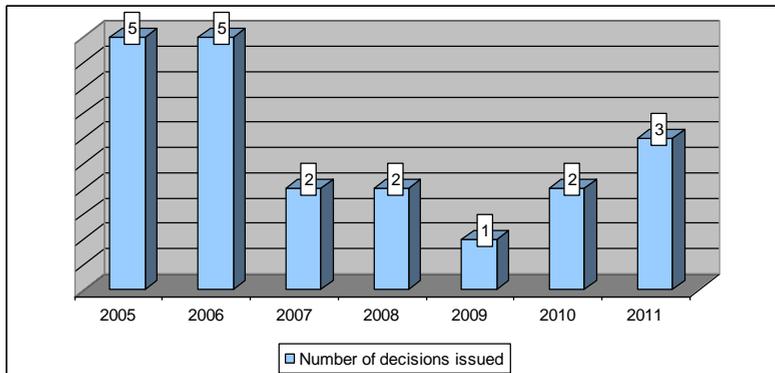


Chart 3: The evolution of abuse of dominance decision issued by the European Commission between 2005 and 2011. Source: made by the author based on data taken from the Annual reports competition

Chart 3 shows the evolution of decisions regarding the abuse of dominance issued by the European Commission between 2005 and 2011. The number of decisions made annually is approximately constant, the peak being recorded in 2010 (7 decisions).



**Chart 4: The progress decisions on the abuse of dominant position issued by the Competition Council of Romania between 2005 and 2011**  
Source: made by the author based on data taken from the Annual reports of the Competition Council of Romania

Chart 4 shows the evolution of decisions on abuse of dominant position in Romania, between 2005 and 2011. Most decisions were issued in 2005 and 2006 (5 decisions), and in 2009 a single

decision regarding abuse of dominant position was issued.

#### 4. Case Study: ENI

ENI is a company operating in the energy sector in Italy. ENI is a state-controlled enterprise whose activity is related to generation, transmission and supply of natural gas in Italy (Case COMP/39.315 – ENI, 2010).

The European Commission started investigations on possible abuse of a dominant position regarding ENI ex-officio. In May of 2006 there were surprise inspections at ENI. The role of these inspections was to gather as much information as necessary for the initial assessment stage. In 2007 the European Commission issued the decision to initiate the procedure regarding the infringement of Article 102 of the Treaty on the Functioning of the European Union. The investigations continued until March of 2009. Throughout these investigations a series of information have been requested to ENI. ENI responded promptly to all inquiries.

The report of the European Commission of March 2009 found the company guilty of violating Article 102 that is of abuse of a dominant position. The report stated that Italy was dependent on imported gas and ENI controlled all gas pipelines across the country. In addition the company dealt with the distribution of these gases with long-term contracts with both industrial and small consumers. The report concluded that ENI had committed an abuse of a dominant position in terms of infrastructure control of the system for importing gas throughout Italy. The European Commission made its findings known to ENI.

ENI was dissatisfied with the conclusions of the report, but was willing to cooperate further with the European Commission, participating in hearings held thereafter.

Following these hearings ENI proposed a number of commitments designed to eliminate the abuse of dominant position. There have been a number of discussions between the prosecution and the European Commission on those commitments, and then they underwent a preliminary assessment. In February 2010 ENI communicated its commitments. These commitments were published, and the Commission invited interested parties to express their views. Although the Commission received some complaints about the commitments proposed by ENI, it considered that the complaints were not justified. After the market test, the commitments proved to be viable, so that the ENI was forced to take the proposed commitments. The commitments related mainly to the disposal of shares held in the infrastructure for gas import system and to the company's obligation of not concluding very long term contracts on natural gas distribution. The European Commission concluded that the above-mentioned commitments were sufficient to restore fair competition on the gas market in Italy, removing the threat of preventing other European competitors from entering the respective market.

In September 2010, when the Advisory Committee has already been consulted the procedure ended with the adoption, notification and publication of the decision on commitments. Since then the commitments have become binding for ENI. The decision was made public later in a press release. The summary of the decision was published in the Official Journal of the European Union in all official EU languages; the full –length decision together with the opinion of the Advisory Committee and the final report were published on the website of the Directorate General for Competition.

## 5. Conclusions

At European level competition is one of the most important policies because the integrity of the domestic market can be granted only under very strict competition. The abuse of dominant position is one of the restrictive competition practices. The dominant position of a company is not prohibited; it is only the abuse of dominant position that is punished.

The abuse of dominant position is contrary to the competition rules as it harms both competition and consumers equally. Accepting an abuse of dominant position on a market would gradually eliminate competitors, and the very existence of some poor-quality goods or services on the market, while maintaining high prices.

At EU level a constant attention was noticeable regarding the improvement of the legislation that regulates the restriction of the abuse of a dominant position over years. The procedure for the detection of abuse of a dominant position is well established, the steps are very clear.

Evidence of this concern is reflected by the evolution of the investigations and decisions on the abuse of a dominant position at European level. Within ten years (January 2004 - February 2013) no less than 1583 investigations of violations of Article 101 and 102 of the Treaty on the Functioning of the European Union were opened.

Thus we can assert that competition authorities have been, are and will be the guardian of consumers.

The analysis of the way a case of abuse of dominant position in Romania is instrumented as well as the analysis of the other restrictive competition practices shall constitute the topic of further research.

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# MEDICAL BRAIN DRAIN - A THEORETICAL APPROACH

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**Abstract:** *Medical brain drain is defined as the migration of health personnel from developing countries to developed countries and between industrialized nations in search for better opportunities. This phenomenon became a global growing concern due to its impact on both the donor and the destination countries. This article aims to present the main theoretical contributions starting from 1950 until today and the historical evolution, in the attempt of correlating the particular case of medical brain drain with the theory and evolution of the brain drain in general. This article raises questions and offers answers, identifies the main issues and looks for possible solutions in order to reduce the emigration of medical doctors. Factors of influence include push (low level of income, poor working conditions, the absence of job openings and social recognition, oppressive political climate) and pull (better remuneration and working conditions, prospects for career development, job satisfaction, security) factors. Developing countries are confronting with the loss of their most valuable intellectuals and the investment in their education, at the benefit of developed nations. An ethical debate arises as the disparities between countries increases, industrialized nations filling in the gaps in health systems with professionals from countries already facing shortages. However, recent literature emphasizes the possibility of a “beneficial brain drain” through education incentives offered by the emigration prospects. Other sources of “brain gain” for donor country are the remittances, the scientific networks and return migration. Measures to stem the medical brain drain involve the common effort and collaboration between developing and developed countries and international organizations. Measures adopted by donor countries include higher salaries, better working conditions, security, career opportunities, incentives to stimulate return migration. Destination countries could fight against the exodus of physicians through self-sufficiency, financial compensations paid for the skilled workforce coming from developing countries and agreements forbidding the recruitment of health professionals from countries already suffering of scarce resources. International organizations’ contribution includes collaboration and actions oriented towards the adoption of an ethical guideline. As the medical brain drain is a global concern, its contraction requires global solutions.*

**Keywords:** *brain drain, medical brain drain, migration, health system*

**JEL classification:** *F22, J21, J24, O15*

## **1. Introduction**

Medical brain drain is defined as the migration of health personnel in search of better opportunities (Dodani and LaPorte, 2005). Although the majority of definitions mention as direction of emigration the one from developing to developed countries, the first to confront with this phenomenon were the developed nations. A proper definition should be: the migration of physicians from developing to developed

countries and between industrialized nations (Wright, Flis and Gupta, 2008). An interesting definition (Muula, 2005) include the loss of health workers (named hard brain drain) and the unavailability of research results to users, in the particular case of Africa (soft brain drain).

Starting with a literature review, this article has two major objectives. Firstly, the article identifies the main theoretical contributions and historical evolution of two phenomena: brain drain and medical brain drain, in the attempt of correlating and emphasizing the similarities. Secondly, the article seeks to raise questions and offer answers, identify main issues and propose solutions for the reduction of medical doctors' emigration from developing to developed countries.

## **2. Literature review**

The four decades of economic research of the brain drain evolution resulted in the highlighting of three main waves (Docquier and Rapoport, 2011). The first wave of economics papers (Grubel and Scott, 1966, Johnson, 1967, Berry and Soligo, 1969) pointed out that the impact of the brain drain on source countries is a neutral one, to some extent even benefic (remittances and positive feedback), the world economy gaining from the free migration (Docquier and Rapoport, 2011).

The second wave (Bhagwati and Hamada, 1974, McCulloch and Yellen, 1977, Miyagiwa, 1991, Haque and Kim, 1995) disclosed the negative impact of the brain drain on the country of origin (unemployment, reduction of economic growth rate, distortions on labour markets, decreased human capital accumulation) and the emphasis of disparities between countries (Docquier and Rapoport, 2011). A solution proposed was the financial compensation ("Bhagwati Tax") offered by the developed nations to the developing ones for their loss of skilled workforce.

The third wave of interest, named the new economics of brain drain (1990s), accepted both the detrimental and beneficial effects on the country of origin. An important contribution represented the empirical studies (Carrington and Detragiache, 1998, Docquier and Marfouk, 2005, Dumont and Lemaître, 2005, Beine et al., 2006), which offered a better understanding of this phenomenon's magnitude (Docquier and Rapoport, 2011).

The medical brain drain and its impact on developing countries attracted interest and reactions amidst research community. Studies tackling the health domain are scarce and little has been written about the historical origins, but to some extent, the three stages of evolution can be identified.

Early literature in the medical brain drain domain consisted in American and British studies pointing out the impact in the "first world" countries (McKay, 1969, Abel-Smith and Gales, 1964, in Wright, Flis and Gupta, 2008) and even more, the benefits offered to developing countries in terms of experience and access to advanced technology, gained by their emigrants (Rashi Fein, 1967, Margulies and Bloch, 1969, in Wright, Flis and Gupta, 2008).

The next wave of studies (J. Van Hoek, 1970, Committee on the International Migration of Talent's study, 1970, in Wright, Flis and Gupta, 2008) reflected the lack of accurate statistical data as the main limit in the process of quantifying the impact of health professionals' migration on developing countries and pointed out the detrimental effects over the donors. The three monographs published between 1971 and 1977, by Oscar Gish, investigated the economic impact on developing countries (Wright, Flis and Gupta, 2008).

Based on these studies, WHO published several reports (in 1973, 1975, 1976, 1978, 1979) emphasizing the complex nature of the international migration of health workforce, where the poorest countries were the losers (Wright, Flis and Gupta, 2008).

Recent literature consists of both theoretical and cross-country empirical studies, underlining the positive and negative effects of medical brain drain mostly on the country of origin, the ethics of the phenomenon and also the global measures that should be taken in order to find a solution for a global growing concern.

The possibility of a “beneficial brain drain” (Beine, Docquier and Rapoport, 2001) through education incentives was also analyzed. Kangasniemi et al. (2007) applied a survey to the Indian doctors working in United Kingdom and found relatively weak links between the migration possibilities and the education decisions (only a percent of 28%). However, the necessary condition for a brain gain is that the proportion of students reacting to emigration prospects exceeds the actual emigration rate. Moreover, in another study, Defoort, 2009 (in Docquier and Rapoport, 2009) identified an optimal brain drain rate of 9 percent, concluding that the number of African countries affected by the medical brain drain (20) is inferior to the number of countries that will report a gain (30) from an increase in medical emigration rate (Docquier and Rapoport, 2009).

### **3. Historical evolution**

Brain drain phenomenon attracted the interest of researchers and provoked controversy starting from its origins (in 1950s) until present. Although the highly skilled migration has its roots in prehistoric times, significantly outflows were reported from the third decade of the 20<sup>th</sup> century (the inter-war period being defined as a forced emigration from Europe to the United States – German intellectuals requesting asylum) (Brandi, 2004).

The period of time from 1946 to 1960 was characterized by an attractive immigration policy implemented by the United States and a context of economic privation affecting most of the European countries. As a consequence, between 1956 and 1961, Britain and Germany supplied USA with scientists: 28.23%, respectively 22.59% of the total emigrants (scientists). Both countries were suffering damages after the War and were incapable of absorbing the surplus of intellectuals produced by their first-class universities, whose emigration was inevitable (Brandi, 2004). Canada and Australia represented also destination countries for skilled emigrants.

The term “brain drain” was mentioned for the first time in Royal Society of London’s Report (1963) correlated with the ruinous effects of highly skilled workforce emigration on Britain’s economy (Brandi, 2004). Measures were introduced by governments in donor countries in order to diminish the exodus, felt by the US in a drastic decline of British and German immigrants.

The medical brain drain had a similar evolution. The necessity of filling the gaps in the health system with foreign workforce led to a number of 12 000 new foreign medical graduates registered in the United States by 1973.

British medical graduates and physicians crossed the Atlantic in order to find new opportunities in United States or Canada, or, even more, in Australia and New Zealand (Wright, Flis and Gupta, 2008). The gaps in the health system were filled by an inflow of foreign doctors – in 1966, a number of 8785 physicians from developing world were working in Britain, 70% coming from India (Wright, Flis and Gupta, 2008).

The period from 1970 to 1980 was defined by new migration flows. United States continued its policy of attracting students and intellectuals, but developing countries became the main source. Due to a lack of academic institutions in their country of origin, the outflows consisted in an increased number of students from the former colonies (Britain and France being the most common destinations) or Asian countries. The US maintained its top position as a recipient country, but other industrialized countries began to attract skilled emigrants – United Kingdom, Canada, Australia, Germany, France (Brandi, 2004). The evolution of the medical brain drain was similar during this period of time.

Between 1960s and 1970s, industrialized countries confronted with personnel shortages in the health sector. The need of recruiting outside its borders came naturally and the ex-colonies represented the main source. The setting of medical universities in the new territories by the great colonizers and the good command of English language, combined with the desire for a better life and the insufficient salaries and inadequate equipment conducted to the emigration of medical doctors to the developed world (Arnold, 2011:351).

The estimations regarding the loss of physicians from developing to developed countries was of 70 000 in 1972 alone (Wright, Flis and Gupta, 2008).

After reaching a peak in 1966-1975, physician migration reduced its level, as industrialized nations oriented through the self-production of a sufficient number of medical doctors (Wright, Flis and Gupta, 2008).

In Europe, the free movement of labour force established by the Treaty of Schengen resulted in a rise in the number of skilled migrants, but, due to the lack of proper monitor, the consequences are difficult to be interpreted. The result was, mainly, a “brain exchange” (Straubhaar, 2000:20). The phenomenon is common to the health sector – 60% of Switzerland’s international medical graduates are from Germany, as do 33% of Norway’s (Mullan, 2005:1816).

After 1990s, the globalization phenomenon and the development of ITC industry created the premise for a global competition between industrialized nations (USA, Canada, Australia, France, Britain) in attracting the highly skilled. After the dissolution of the Eastern Bloc, the former communist countries offered a new source of skilled emigrants – between 1990 and 1995, Russia lost 120000 intellectuals (Brandi, 2004).

Developed nations attract physicians from developing countries but also draw on each other: Britain physicians represent the largest group of international medical graduates in Canada and Australia, and Canadian physicians are placed on the fifth position in the top of medical immigrants in United States. This is the case of a “brain circulation”, where the net beneficiaries are US and Australia and the net donors are UK and Canada (Mullan, 2005:1814).

A recent study of physician brain drain analyzing the emigration factor (reflecting the level of emigration of physicians from each source country to the 4 recipient countries – US, UK, Canada and Australia) concluded that lower income countries contribute with 40% of the international medical graduates in Australia and with 75.2% in United Kingdom (Mullan, 2005:1813). India is the country that sends the most physicians to recipient countries, followed by Philippines and Pakistan (Mullan, 2005:1814).

African continent is the most affected by the medical brain drain phenomenon. Also, it is particularly severe in Sub Saharan Africa, South Asia, East Asia and Latin America. The most affected countries are Grenada, Dominica, Saint Lucia, Ireland, Liberia, Jamaica and Fiji (Docquier and Rapoport, 2009). Dominica has an

emigration rate of health professionals of 98.1% (2 doctors out of 100 educated will remain in the country), followed by Grenada – 97.9% and Santa Lucia – 69.8% (Docquier and Schiff, 2009).

Importers of medical personnel are Australia, Canada, France, Belgium, UK and US. Donor countries could be classified into surplus countries voluntarily sending medical workers abroad (Cuba, India, Egypt and Philippines) and shortage countries (Africa, the Caribbean and Asia) (Rutten, 2009).

The emigration rate of doctors is highly correlated with the emigration rate of highly skilled in general, the impact on the socio-economic development being harsher for the first category (OECD, 2007).

The ethics of this phenomenon is questionable, as the disparities between developed and developing countries are growing constantly. Developed nations supply their gaps with skilled workforce from developing countries, the latter confronting with scarce human resources and the loss of their investments in creating highly skilled individuals.

The main issue related to the medical brain drain phenomenon is the accuracy of statistics existent. Developing countries don't hold accurate statistics concerning the emigration of medical doctors, which is a hindrance in monitoring and assessing the impact. Usually, the empirical studies are based on data available in destination countries or in international databases (WHO, World Bank, etc). Another limit is the different definition offered by literature, which leads to difficulties in comparing the values between countries: Clemens and Peterson (2006) use the country of birth for defining medical emigrants, whilst Docquier and Bhargava (2006) use the country of training (Docquier and Rapoport, 2009).

#### **4. Medical brain drain and developing countries**

The majority of skilled emigrants in health sector come from developing countries, fact that attracted controversy at international level regarding the impact over the health system and economic growth of donor countries. A combination of economic, social and personal factors contributes to the decision of leaving the country (Dodani and LaPorte, 2005).

*What factors influence the medical brain drain?* Some studies centered on the identification of push and pull factors influencing the migration of health personnel. Pull factors are associated with the country of destination and include better remuneration and working conditions, prospects for career development, job satisfaction, security. Push factors are associated with the country of origin and include the low level of income, poor working conditions, the absence of job openings and social recognition, oppressive political climate.

Push and pull factors are closely connected with economic environment and the possibilities of advancement. As opposed, the “stick factors” are linked with personal or social aspects of life (Tjadens, Weilandt and Eckert, 2013:47). “Grab factors” are also mentioned in the literature, tied with developed countries (Muula, 2005).

*What impact has medical professionals' emigration?* One of the main factors for the economic growth and human development in a developing country is the size and quality of the health sector (Docquier and Rapoport, 2009). Moreover, the efficiency of a health system is dependent on its human resources (both quantity and quality). Many studies concluded that the medical brain drain is the major factor contributing to insufficient medical personnel, whose consequences are affecting not only health

systems in donor countries, but also the economic development and the national security.

The negative impact on health systems, health personnel scarcity and disparities between regions, the fight against HIV and AIDS became a growing concern (Mullan, 2005). Developing countries confront with the loss of the financial investments in creating health professionals and their most valuable intellectuals in the benefit of developed nations. The emigration of a medical professional represents a loss of US\$184,000 to Africa (Rutten, 2009). On the other hand, according to Van Hoek and Gish studies, emigrants from developing countries are treated as “dispensable commodities”, used only when necessary and the quality of their training is considered to be inferior, thus transforming the native medical personnel into preferred candidates (Wright, Flis and Gupta, 2008).

Beside all these negative consequences, recent literature raised the possibility of a “brain gain” for the developing countries – in terms of remittances, diaspora externalities, return migration.

Remittances contribute to the development of the donor country. Money send back to family can contribute to further investments in education, in the attempt of emigration prospects. The tendency of physicians is to migrate permanently and to bring their family with them in the destination country, and consequently the remittance level is lower than in the case of low-skilled workers. However, for countries like China, India, Philippines, Egypt and Cuba, remittances are considered important source of revenues (Rutten, 2009).

Scientific networks facilitate the movement of people, goods, ideas between sending and receiving countries. Also, they contribute to the increase of foreign direct investments inflows (Docquier, 2006)

Return migration is another source of “brain gain”, medical doctors returning in their country of origin with the experience and knowledge acquired in developed world. Emigrants’ return constitutes a potential source of growth for the donor county (Docquier, 2006). The main problem is that the available equipment and working conditions in developing countries are not adequate to the skills they gained during their training abroad. In this case, the big challenge consists in identifying the best methods that should be implemented to stimulate return migration and transform it into a benefit.

*What measures could be adopted to stem the medical brain drain?* As the medical brain drain represents a global and growing concern, resulting from a combination of push and pull factors the measures to stem it should be addressed at global level and should be the result of an agreed participation of developing countries, developed ones and international organizations (Pang et al, 2002).

Developing countries’ action may include better salaries and working conditions, security and career opportunities in order to reduce the emigration rate, or incentives to stimulate return migration. Current political and economic situation of donor countries combined with the freedom of medical doctors to move, study and practice wherever they want, make this policy option an illusory one.

Measures that could be implemented by the developed nations include: self-sufficiency, financial compensations paid for the skilled workforce received from developing countries and agreements forbidding the recruitment of health professionals from those countries already suffering from scarce resources. Some measures have already been implemented, like the Global Code for Practice for International Recruitment of Health Personnel, implemented in 2010 (WHO, 2011).

The reaction of international organizations (such as World Health Organization, International Organization for Migration, World Bank, United Nations) should consist in collaboration and common efforts in the adoption of ethical guidelines in the fight against this disastrous phenomenon (Pang et al, 2002).

## **Conclusions**

This study offers a review of the literature on the brain drain and medical brain drain starting with the early contributions (from 1950s) until present. The first attempt is to identify similarities between the two phenomena. The three stages of research highlighted in the brain drain literature can be identified to some extent in the medical brain drain literature. Offering a survey of the most important contributions, this study may represent the starting point for future research with regard to the possibility of transforming the brain drain into a brain gain.

A historical evolution of the outflows of skilled emigrants in general and medical doctors in particular showed same trends from 1946 to present. The main limit identified is the lack of accurate and comparable statistical data, mostly in donor countries, thus leading to difficulties in identifying the magnitude of the phenomena. The research done so far is a proof of the fact that the first step in dealing with medical brain drain has been accomplished: the awareness. Future research may focus on the measures to be adopted, area in which little has been done.

A third way of development in this domain can be the debate over the ethics of health professionals' emigration. The free movement of people is supposed to bring benefits for both developed and developing countries, but the reality seems to be far away from this: the disparities between countries are growing constantly, the world being divided between "winners" and "losers", between core and periphery. Industrialized nations compete in attracting the highly skilled while donor countries confront with the loss of their most valuable intellectuals and the investments in their education.

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# POLAND'S OUTWARD FOREIGN DIRECT INVESTMENT

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**Abstract:** *The paper contributes to the discussion of motives, determinants and effects of outward FDI of companies from emerging economies. We analyze the the scale, structure, geographical location and effects of Polish foreign direct investments as well as we prioritize their determinants. The interest of Polish companies in investing abroad has increased sharply over the last decade, due to the need to broaden the scale of business operations and geographical scope of their economic activities after the Poland's accession to the European Union.*

**Key word:** *Poland; active internationalization of enterprises; outward foreign direct investment; FDI impacts; FDI determinants*

**JEL classification:** F21

## 1. Introduction

Internationalization of business entities through FDI relationship significantly increases the scale of the local economy with the global system of production and is an important part of building its international competitiveness. Foreign direct investments have been a major factor contributing to the Polish economic growth. The socio-political and economic transformation that has taken place over the last 20 years completely changed the conditions for the functioning of Polish companies, which in recent years increasingly decide to invest abroad, because in the course of their development, the natural need to broaden the scale of operations and the geographical scope of their activities appeared.

The aim of this paper is to identify and prioritize determinants of foreign direct investments made by Polish companies and show their geographic directions of and industry profile and barriers to expansion capital.

There is no one theory that explains the process of internationalization of companies entirely, so it is necessary to use the achievements of various theories together. Selection of the appropriate theoretical framework for the study of various aspects of the country's investment expansion, also depends on what aspect of internationalization is analyzed. For the analysis of international economic expansion, in terms of the home or host country, the mainstream macroeconomic theories are used. Theoretical concepts explaining the phenomenon of FDI at the macro level (Dunning, 1981, 1986; Ozawa, 1992) indicate that the economy has to reach a certain threshold level of development, to be able to become an exporter of FDI. Comparative advantages currently held by Poland are specific to the phase of international expansion, so it can be concluded that in selected sectors of the economy, this level has already been reached.

If the analysis of internationalization applies to the company, the more relevant are microeconomic concepts (Caves, 1996; Knickerbrocker, 1973; Spencer, 2008) that emphasize the specific competitive advantages of individual companies undertaking FDI. They can be of economic nature as well as of psychological and behavioral one. They include the theory of the firm and of market structure. Common feature of

microeconomic theories is the assumption that because of the need to operate in a different political, economic, institutional (Cantwell et al., 2010; Dunning and Lundan, 2008), legal and cultural environments, companies, undertaking international expansion, incur additional costs, which must be compensated in surplus. The reasons for international expansion are as many as the number companies being involved in it, but it is also influenced by the specificity of the sector, as well as by the driving forces of globalization (Porter 1996; Yip, 2004). Thus, the foreign expansion of companies depends on a number of motives like: high profits, business growth or motives that determine the achievement of such goals. The reasons for internationalization boil down mainly to the implementation of the objectives pursued by the company. Types of motives and their classification are very diverse, but the most distinguished are: market conditions (economic, business), costs, resources - in particular the acquisition of strategic resources - and political ones.

## 2. FDI size and growth

Since the beginning of this century, the investment activity of Polish enterprises at the world economy has been growing significantly. By the year 2000 Polish cumulative value of direct investments abroad (FDI) amounted to only 1 billion USD (see Figure 1). The rapid growth was observed after the accession of Poland to the European Union in 2004, with the record high of 9.2 billion USD in 2006. Now, after a decline, in relation to the global financial crisis, Polish FDI regain their momentum i.e. 7,3 billion USD in the year 2011 (see Table 1), increasing the cumulative value of to 49,7 bln USD in 2011 and 57,5 bln USD in 2012. This means that in the past 5 years of the financial crisis, the cumulative amount of funds invested by Polish companies rose by over 200%. In terms of outward investments Poland is in the 44th place in the global league table.

It is worth mentioning that a large part of Polish foreign investments are made through the companies located in countries with favorable tax regulations or/and favorable to the formation of the holding structures, which means that the official statistics do not account for a large part of such investments.

## 3. Geographical location

Polish firms have invested mainly in Europe (92,4% of all FDI – see Figure 2). They have carried out 78% of investments in the wealthiest, demanding and highly competitive the European Union markets (see Figure 3).

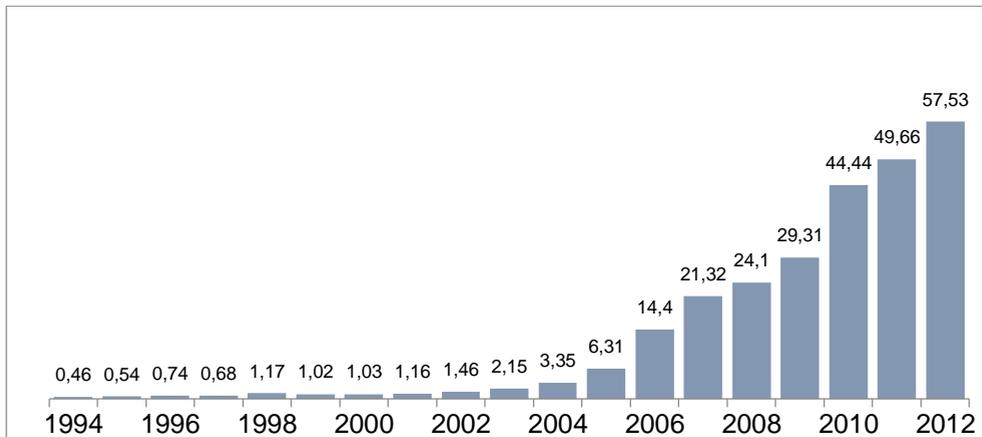
**Table 1:** Polish direct investment abroad in millions of USD (net transactions)

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
16	-90	230	305	955	3392	9168	5664	4613	4562	7484	7335

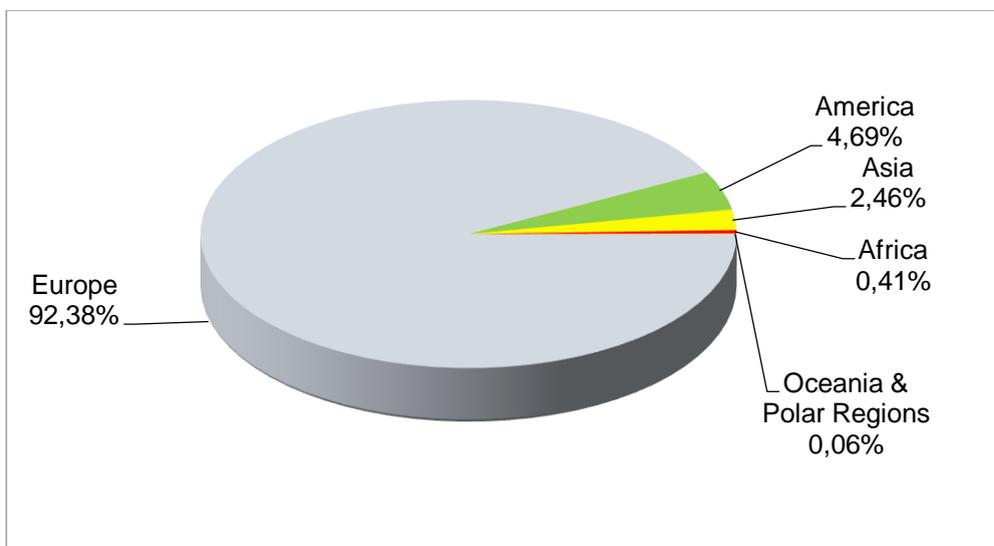
Source: Balance of Payments Statistics, National Bank of Poland, <http://www.nbp.pl/home.aspx?f=statystyka/statystyka.html>.

However, most of these investments, in particular in Luxembourg, Belgium (and non-member Switzerland) are primarily financial in nature and associated with the capital structure of companies, transactions at third markets and tax issues. Luxembourg, that is perceived as a transit country for investments, has attracted 30,6% of Poland's cumulative FDI in the EU (or 23,8% of all Polish FDI), ranking ahead of Britain with 14,2% and two other transit countries i.e. Cyprus with 8,4% and the Netherlands with 7,8%, Belgium 7,1%. Lithuania with 6.4%, the Czech Republic with 6.3% and

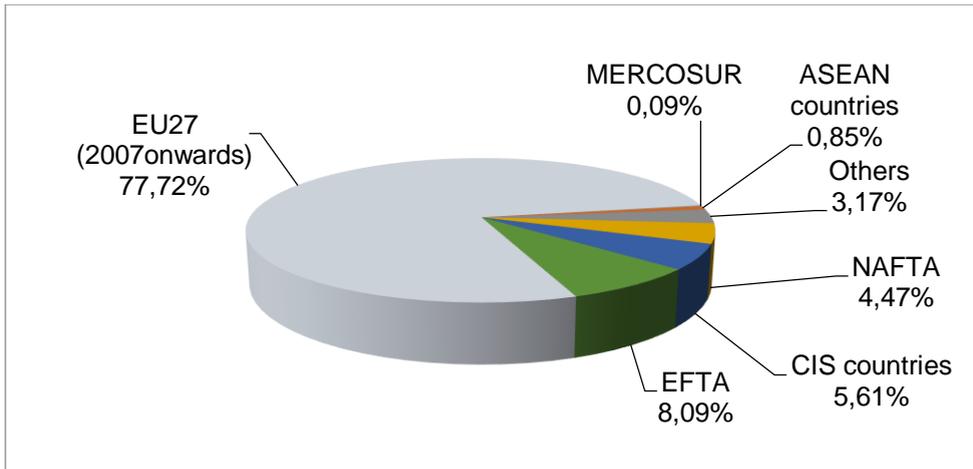
Germany with 5.4% (see Figure 4). The most common directions of all Polish FDI is also Ukraine, USA, Russia and Romania.



**Figure1:** Polish cumulative foreign direct investment, 1994-2012 (in billions of USD)  
 Source: own calculations based on National Bank of Poland data, <http://www.nbp.pl/home.aspx?f=/statystyka/statystyka.html>.

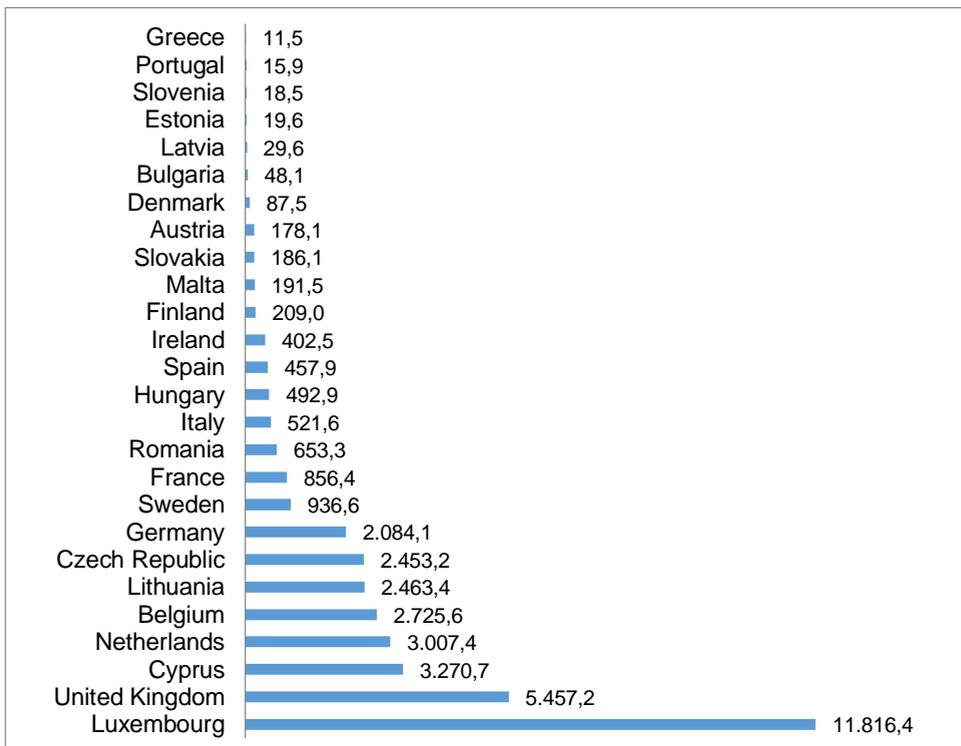


**Figure 2:** Polish cumulative FDI outward position at the end of 2011 broken by regions  
 Source: own calculations based on National Bank of Poland data, <http://www.nbp.pl/home.aspx?f=/statystyka/statystyka.html>.



**Figure 3:** Polish cumulative FDI outward position at the end of 2011 broken by economic zones

Source: own calculations based on National Bank of Poland data, <http://www.nbp.pl/home.aspx?f=/statystyka/statystyka.html>.



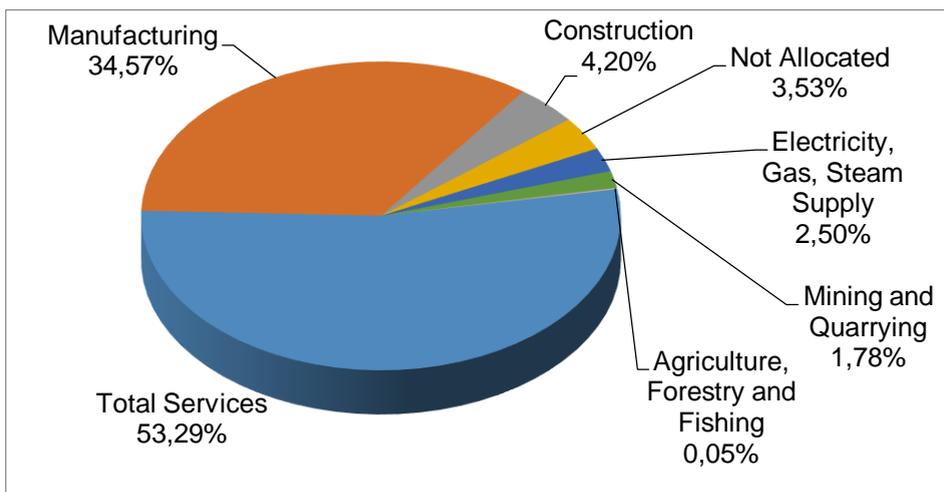
**Figure 4:** Polish cumulative FDI outward position in the EU at the end of 2011 broken by country (millions of USD)

Source: own calculations based on National Bank of Poland data, <http://www.nbp.pl/home.aspx?f=/statystyka/statystyka.html>.

#### 4. Distribution by sector

The investments are most highly concentrated in the service sector, which accounted for 53,5% of total cumulative FDI and 57,2% of total income on FDI in 2011, as well as in manufacturing sector that accounted for 34,6% of FDI and 15,1% of total income on FDI (see Figure 5, 6). Three industries stand out in service sector. Firstly, the professional, scientific and technical (holding activities) that accounts for 39,6% of FDI in services (20% of all cumulative FDI), but giving relatively small fraction of sectoral income, i.e. 7% and 4% of total income in 2011 (22% and 16% in 2010). Secondly, financial and insurance activities that accounted for 30,2% of sectoral FDI (15,3% of all FDI) and 60% of sectoral and 36% of total income on FDI. Thirdly, wholesale and retail trade, repair of motor vehicles and motorcycles that accounted for 21,4% of sectoral investments (10,9% of all FDI) and 18% of sectoral and 11% of total income on FDI (see Table 2).

Four industries stand out in manufacturing sector. Firstly, refined petroleum products and coke that accounts for 21% of sectoral FDI (7% of all cumulative FDI). Secondly, vehicles and other transport equipment that accounted for 14,9% of sectoral FDI (5% of all FDI) and 55% of sectoral and 9% of total income on FDI. Thirdly, food products, beverages and tobacco products that accounted for 14,3% of sectoral investments (5% of all FDI) and 20% of sectoral and 3% of total income on FDI. Fourthly, basic metals and fabricated metal products that accounted for 11,4% of sectoral investments (4% of all FDI) and 27% of sectoral and 4% of total income on FDI (see Table 3).

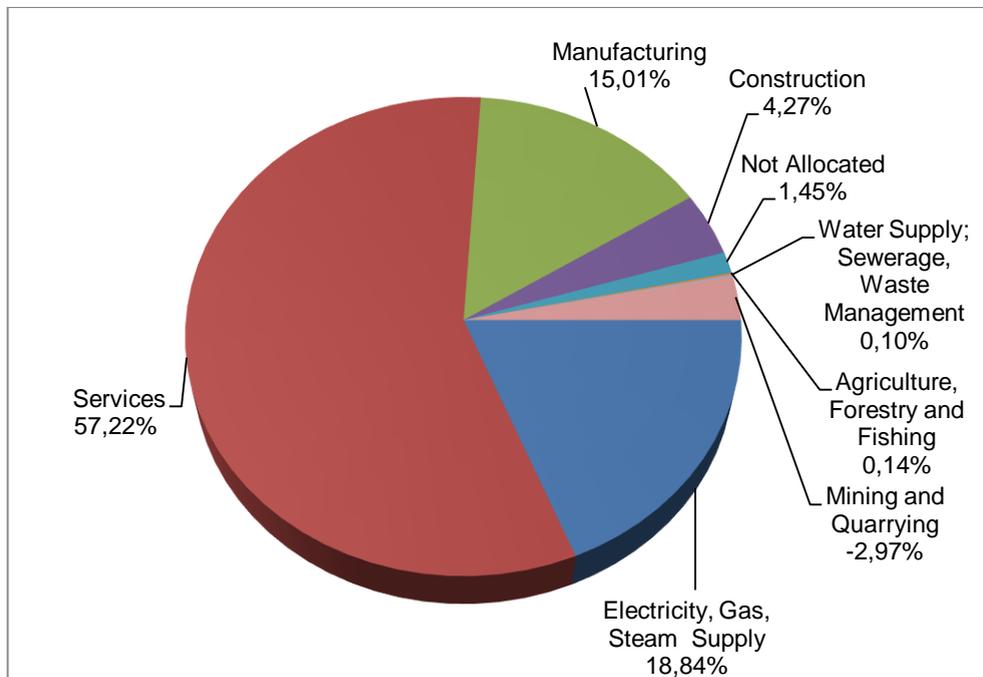


**Figure 5:** Polish cumulative FDI outward position at the end of 2011 broken by economic activity of the non-resident direct investment enterprise

Source: own calculations based on National Bank of Poland data, <http://www.nbp.pl/home.aspx?f=/statystyka/statystyka.html>.

Taking into account FDI/income ratio in service sector, the most income bringing were investments in financial and insurance activities, education, and wholesale and retail trade, repair of motor vehicles and motorcycles. Professional, scientific and technical activities, in which cumulative FDI have been the highest ones, FDI/income ratio was very low (see Table 2). In manufacturing sector the highest FDI/income

ratio was in chemicals and chemical products industries, vehicles and other transport equipment, machinery and equipment, and basic metals and fabricated metal products. The lowest ratio was in refined petroleum products and coke industries in which cumulative FDI have been the highest ones in manufacturing sector (see Table 3).



**Figure 6:** The share of sectors in total income on FDI at the end of 2011  
Source: own calculations based on National Bank of Poland data, <http://www.nbp.pl/home.aspx?f=/statystyka/statystyka.html>

**Table 2:** Polish cumulative direct investment in service sector at the end of 2011 broken down by industries (millions of USD)

Description	FDI	Percent of total	FDI income	Income/FDI ratio
Total services	26496.8	100,00	1020,0	0,038
Professional, scientific and technical activities	10 481,50	39,56	74,9	0,007146
Financial and insurance activities	7 994,20	30,17	606,9	0,076
Wholesale and retail trade; repair of motor vehicles and motorcycles	5 662,30	21,37	185,4	0,033
Real estate activities	2 002,80	7,56	-121,6	-0,061
Administrative and support service activities	933,3	3,52	84,2	0,09
Transportation and storage	418,7	1,58	7,9	0,019

Description	FDI	Percent of total	FDI income	Income/FDI ratio
Accommodation and food service activities	260,7	0,98	10,5	0,04
Education	11,2	0,04	0,7	0,063
Arts, entertainment and recreation	10,1	0,04	-1,5	-0,149
Information and communication	-1 326,30	-5,01	163,8	-0,124
Other service activities	39,9	0,15	-	-

Source: own calculations based on National Bank of Poland data, <http://www.nbp.pl/home.aspx?f=/statystyka/statystyka.html>

**Table 3:** Polish direct investment in manufacturing sector at the end of 2011 broken down by industries (millions of USD)

Description	FDI	Percent of total	FDI income	Income/FDI ratio
Total Manufacturing	17 200,20	100	267,5	0,0156
Refined petroleum products and coke	3 609,50	21,00	-273,4	-0,076
Vehicles and other transport equipment	2 565,50	14,92	147,8	0,058
Food products, beverages and tobacco products	2 463,90	14,32	52,8	0,021
Basic metals and fabricated metal products	1 961,50	11,40	73,1	0,037
Other manufacturing	1 847,80	10,74	35,7	0,019
Rubber and plastic products	1 203,50	7,00	31	0,026
Chemicals and chemical products	1 079,30	6,27	148	0,137
Computer, electronic and optical products	1 026,70	5,97	4,8	0,005
Textiles and wood activities	524,20	3,05	15,2	0,029
Communication equipment and consumer electronics	502,10	2,92	0,2	0,000
Machinery and equipment	416,20	2,42	23,3	0,056

Source: own calculations based on National Bank of Poland data, <http://www.nbp.pl/home.aspx?f=/statystyka/statystyka.html>

## 5. Characteristics of Polish companies investing abroad

1443 Polish entities (in 2010) located their capital in 2988 foreign units in 96 countries. 2512 by acquiring shares, 358 by setting up branches, 84 setting up plants and 34 in other forms. They had direct shares in 2339 foreign units, indirect shares in 560, and both direct and indirect shares in 89 foreign units. In 1782 units they had 100% shares, in 598 from 50.01% to 99.99%, and in 608 units - up to 50%. 926 of 1443 entities, that had branches and subsidiaries abroad, were limited liability companies, 438 – joint-stock companies, 25 - general partnerships, 17 – 37 were

limited partnerships and entities organized in other legal forms. The largest number of entities (488) were dealing with manufacturing (in their 921 foreign subsidiaries), 328 entities with trade and repair of motor vehicles (in 709 international units), 189 with construction (in 288 international units), 113 with professional, scientific and technical activities (in 258 international units). 1146 out of 1443 entities belong to groups of enterprises, 1802 were located in all EU countries. Approximately 52% of foreign entities were established in all seven bordering countries. Most of the foreign units were headquartered in Germany - 400, Ukraine - 356, and in the Czech Republic and Russia - respectively 246 and 231. The total number of employees (in all 2988 foreign units) amounted to 148,1 thousand foreign people, of which the largest share was in manufacturing sector (32.1% or 47.6 thousand employees). Exports of products, goods and materials, by foreign entities, amounted to 29,03 bln PLN. The largest share belonged to manufacturing units (85.7% or 24,9 bln PLN). Exports to parent company and to the subsidiaries within the group of companies amounted to 8,1 bln PLN (28.1% of total exports by foreign entities). The value of imports, carried out by foreign units, amounted to 44,6 bln PLN. As in the case of exports, the highest share of imports (83.5% or 37,3 bln PLN) belonged to the entities operating in the field of manufacturing. In contrast to exports, imports from parent and affiliated companies accounted for the vast majority of imports of foreign units (82.5% or 36,8 bln PLN). The investments in tangible fixed assets amounted to 3,7 bln PLN. The largest expenditures on assets incurred in foreign units engaged in manufacturing - 1,2 bln PLN or 32.5% of total expenditures (Działalność podmiotów, 2012).

The nature of business was different in the case of 1223 foreign entities (of all 2988) as compared to the basic economic activity of the Polish parent company, while in 1765 units was consistent with the type of business carried out by the Polish entity. Distribution of the number of foreign units according to their activities was as follows: 986 (33.0%) units were involved in the trade, repair of motor vehicles, 535 (17.9%) in manufacturing, 347 (11.6%) in construction, 260 (8.7%) in professional scientific and technical, 239 (8.0%) in transport and storage, and 621 (20.8%) in other types of activities. The largest revenues from sales of products, goods and materials were achieved by foreign units engaged in manufacturing (53,4 bln PLN), and in trade and repair of motor vehicles (35,4 bln PLN). Taking into account the location of the foreign units, the highest revenues were achieved by international units based in the Czech Republic – 24,2 bln PLN and in Germany – 24,2 bln PLN. The biggest exports and imports also fell into units which were engaged in manufacturing, and trade and repair of motor vehicles, respectively export – 24,4 bln PLN and 2,5 bln, and imports - 40 bln and 12,6 bln PLN.

## **6. Motives and perceived effects of investments**

The main motive for the investment decisions of Polish companies is the size of local market (86% of all FDI are in the EU and EFTA. See Figure 3). Relatively important is also the level of competition in target markets, the geographic and cultural proximity, the size of local resources, the low risk and political stability. A large geographical distance is a factor negatively influencing the investment decisions (see Figure 3), in the case of greenfield investments and acquisitions by companies in the production and industrial sectors, but it does not matter for services companies (Kowalewski and Radło, 2012). In particular, companies prioritize the reasons for investing abroad as follows:

1. access to the local market, 2. poorer, 3. increase in global market share, 4. blocking competition, 5. competitors has already done so, 5. access to local brands, 5. global market access, 6. access to local technology, 7. competition lower than in Poland, 8. diversification of product portfolio, 9. cheap labor, 10. business environment better than in Poland, 11. optimization of supply chain, 12. exchange rate prevention, 13. higher quality of human resources, that is an important factor when deciding on greenfield investments, and only to a small extent important in the case of brownfield ones (Polski Czempion, 2012). So, in the hierarchy of reasons, a development motive (access to foreign markets, or simply an increase in sales) prevails. High on the list is "global" motive, what means that many Polish companies have already recognized themselves as current or potential players in the world market. Significantly low position in that hierarchy occupy cost and efficiency motives. Investors perceive the effects of their investments as being poorer-than-expected, in the case of access to the local market and growth of the company, slightly poorer in the case of global market access and blocking competitors (Aktywność inwestycyjna, 2012). However, significantly higher-than-expected are perceived effects as to: diversification of product portfolio, cheap labour and competition lower than in Poland. The rest effects slightly exceed expectations. The main barriers and challenges in investing abroad, identified by Polish investors, are: cultural differences, organizational and administrative burdens and corruption in the host country). Also important are language barriers, problems with the distribution at local market, high operating costs and the lack of qualified workers (Polski Czempion, 2012).

Many Polish companies point out that thanks to foreign investments are able to maintain or even boost sales, what often would be impossible without entering new markets and without creating new production capacity. They also obtain the stability by becoming less dependent on the situation at the domestic market, and get greater access to raw materials. Thus, foreign investment is a way to ensure the diversification of market risk related to the demand for company's goods and services, as well as the risk related to the security of a supply chain.

Polish firms, investing in the Far East and eastern markets, have competitive advantage in products and services that have been perceived as being of good quality for a long time. The fact that Poland is the member of the European Union strengthens its investors, that are perceived as serious partners providing world-class products. Many Polish entrepreneurs combine knowledge and experience, acquired in the course of over 20 years of transformation, giving them a clear advantage in less developed countries, that are still undergoing such transformation, over the competitors from well-established Western countries. They are able to work in a less stable and supportive institutional and administration environment. They show relatively high flexibility due to the smaller size and shorter decision chains, so they are able to respond quickly to changing market conditions and to adapt their products to the current market situation. The economic crisis may help Polish entrepreneurs to gain entry into foreign markets, as many buyers, even in developed markets, resign from expensive branded products and are looking for goods and services with the same quality, but at a lower price. Such a situation fosters the promotion of new brands (Polski Czempion, 2012).

## 6. In conclusion

The analysis showed that the Polish outward direct investments are made, as a rule, in Europe and the most popular investment directions are the European Union countries. The transfer of business operations abroad is due to financial surpluses, increased competitiveness and limited capacity of the Polish market. FDI are not nearly motivated by the search for natural resources, reduce the cost or by favorable taxation. Polish OFDI has the tendency to increase in parallel with its economic growth. They are largely commercial in nature and are intended to support exports in the form of commercial offices and retail outlets. Thus, the outflow of domestic capital does not substitute for exports significantly so it is not very likely to influence negatively Polish economy.

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## ECO-INDUSTRIAL PARK - A TOOL FOR SUSTAINABLE DEVELOPMENT

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**Abstract:** *Local communities embracing the concept of Eco-industrial park are looking for some additional benefits for all the interested parties – both public and private: higher economic efficiency, the increase of competitiveness by applying last minute technologies, generation of additional revenues through positive regulations at the community level, the creation of jobs, solving the conflict between economy and environment, diminishing the demand on the county infrastructure, decreasing the effects of pollution, using energy from regenerating sources and replacement materials. Communities and enterprises creating Eco-industrial parks will have common grounds for industrial development, which is much more competitive, more efficient and much cleaner than traditional industrial parks. Moreover, the new business niches will be open to recruitment or new incubators. Eco-industrial parks represent a special category compared to industrial parks, a category which is different from the classical ones due to the fact that they are designed in such a way so that they promote the collaboration between companies in order to reuse recyclable materials and green energy sources. A long-term vision must reflect the focus on the creation of collaboration networks between firms and the fact that an Eco-industrial park should be a business community, not only a mathematical sum of companies located in the same geographical area. The quality, continuity and interconnection of economic flows within the firms of an Eco-industrial park are important characteristics for the success of Eco-industrial networks. The following discussion tackles the way in which an Eco-industrial park is set-up: creating and implementing an Eco-industrial park in accordance with the principles of circular economy or transforming an already existing industrial park into an Eco-industrial park. The quality, the continuity, the number of interconnected firms, the flows of resources and the relations between the firms are success factors within Eco-industrial networks. The successful cases – especially those in the USA or the Northern countries – have proved that Eco parks engage a multitude of entities, from regional/local authorities to non-governmental organizations; in these entities' action the objectives and actions of the firms; management overlap with those of the community management.*

**Keywords:** eco-industrial park, resources, circular economy, local community , sustainable development

*JEL classification:* F21, F22

### **1.Introduction**

In the last decades, high technology industry was connected to the regional development and the involvement of local communities. The running of some economic-industrial activities based on high technology processes was concentrated in certain areas, known by the name: industrial parks, industrial areas, technological parks, scientific parks, business centres, technological districts or industrial districts.

Such areas are many times associated to concepts like economic growth poles of multiplication effects.

An industrial Eco park can be defined as a business community (production, services etc.) which seeks to improve its economic, social and environment performance in concert with the administration of human, financial and material resources.

The purpose of an Eco park is to improve the economic performance of participating firms, reducing to a minimum their negative impact on the community, environment and other interest groups.

Communities and enterprises creating eco-industrial parks will have a common ground for industrial development, which is much more competitive, more efficient and much cleaner than traditional industrial parks. Moreover, the new business niches will be open to recruitment or new incubators.

Local communities embracing the concept of Eco park are looking for some additional benefits for all the interested parties – both public and private: higher economic efficiency, the increase of competitiveness by applying last minute technologies, generation of additional revenues through positive regulations at the community level, the creation of jobs, solving the conflict between economy and environment, diminishing the demand on the county infrastructure, decreasing the effects of pollution, using energy from regenerating sources and replacement materials. The Eco parks can generate benefits both for the local-regional community as well as for the companies operating there; these benefits are given by the recovery of resources, more ecological production, lower environment taxes, high company productivity, government facilities, interaction system among the firms, etc. The eco-parks should be conceived so that they can support the implementation of this whole system.

## **2. What is an "industrial Eco park"?**

An eco-industrial park is a community of manufacturing and service businesses in which member businesses seek enhanced environmental, economic, and social performance through collaboration in managing environmental and resource issues. By working together, the community of businesses seeks a collective benefit that is greater than the sum of individual benefits each company would realize by only optimizing its individual performance (Lowe, Ernest A. 2001).

The Eco-industrial parks can be best defined as business communities that cooperate with each other and with the local community to efficiently share resources, subassemblies and reuse of waste from partner firms (Côté and Cohen-Rosenthal 1998).

The definition provided by Peck and Ierfino associate the Eco-industrial parks to Eco-industrial development or the industrial development. We are talking about parks in which there is material and energy cycling, the waste or the output of one firm essentially becomes an input into the production process of another firm. All these waste exchanges result in cost savings and revenues for the firms. (Peck, Steven & Ierfino, Laura. 2003)

An Eco-industrial park (EIP) is a community of companies, located in a single region, that exchange and make use of each other's by-products or energy (Desrochers 2002).

An Eco industrial park is an entity, designed and managed according to the idea of Circular Economy and the theory of industrial ecology. Through their own

management system, the companies are connected to form a complex in which the products or waste of one company can become the raw material or resources of another company. (SEPA 2003).

The Eco-park can be perceived as an instrument to ensure the industrial development in urban areas, quantifiable through the benefits of the local communities in the economic, social and environmental area.

The Eco-industrial parks represent a special category compared to industrial parks, a category which is different from the classical ones due to the fact that they are designed in such a way so that they promote the collaboration between companies in order to reuse recyclable materials and green energy sources. In this view, in an Eco-industrial park, the way in which a company operates its production is taken into consideration when ensuring the park's general maintenance activity so that it gets through the synergy of different companies to an ecosystem from the point of view of resource use and optimize the energy consumption.

Gibbs and Deutz (2004) concluded that the Eco-parks do not merely mean a simple eco label or a green dot, but "the existence of a network of inter-organizations and the collaboration as transfer of materials and energy flows so that maximum efficiency in using the resources should occur.

The necessity of Eco-parks appeared in the countries or regions which had a very high degree of industrialization and, therefore, they were confronted with rapid resource weariness. The main advantage of an industrial park implies a physical change of materials, water and by-products (Chertow 2000).

To be able to speak about a real Eco-industrial park, a development should be bigger than: a single by-product exchange or network of exchange, a recycling business cluster, environmental technology companies, companies making "green" products, an industrial park designed around a single environment theme (for example a solar energy-driven park), a park with environment friendly infrastructure, a mixed-use development (industrial, commercial, and residential) (Lowe 2001).

We must admit that the notion of Eco-industrial park is not a concept related to environment and ecological problems. The purpose of these entities is to generate wealth for the firms and communities of people by better using resources and, paradoxically, of waste. Sometimes it is very difficult to bring to a common denominator the needs and interest of the firms, local communities, local authorities and interest groups. The role of these eco-industrial networks is to solve the "conflicts of interests" between different players who might be involved in the sustainable development of a particular area.

### **3. Influencing elements in the development of eco-industrial parks**

If the notion of industrial park has already been introduced all over the world, the eco parks aspire to be a superior economic activity stage, which covers all the drawbacks of excessive industrialization and the less sustainable use of everything meaning resources. The comparative advantages of eco-industrial parks compared to classical industrial parks result from the way they are conceived and implemented:

1. Existence of the community of interests and involve that community in the design of the park
2. Reduce the negative environmental impact through substitution of toxic materials, material exchanges and integrated treatment of wastes.
3. Maximize energy efficiency through appropriate system design.
4. Reuse, recovery and recycling materials between partner firms.

5. Link or network companies with suppliers and customers where the eco-industrial park is situated.
6. Continuously improve the environmental performance by the individual businesses and the community as a whole.
7. Have a regulatory system which permits some flexibility.
8. Use economic instruments which discourage waste and pollution.
9. Existence of an information management system which seeks to train and educate managers and workers about new strategies, tools and technologies to improve the system.
10. Marketing strategies to attract companies which fill niches (Côté and Cohen-Rosenthal 1998)

The premises for the design and success of an Eco –industrial park are: integration within natural systems – the design of eco parks in harmony with the characteristics and constraints of local ecosystems; energy systems – the large-scale use of regenerating sources, the reuse and recycling of materials among the enterprises in the Eco park; the identification of companies in the region as consumers and generators of secondary useable products through resource and recycling network exchanges; information management systems – the existence of an exchange of information between companies on the local environment conditions, community, feedback on the performance.

A long term-vision must reflect the accent regarding the creation of networks of firm collaboration and that an eco-industrial park should be a business community and not just a mathematic sum of companies located in the same geographic setting. The success factors for an eco-industrial park are: geographic setting, close proximity of companies, exchanges of materials and energy, diversity of players, continuity of flows, economic viability, low economic risks, economic gains are shared approximately equally, existing institutional regulations, environmental awareness in the firms, balanced interdependence relationships between partners, similar organisational cultures of firms, active participation, commitment, trust, vision of the Eco-industrial parks, contracts / informal control mechanism, legal support, political support (Gibbs & Deutz 2004).

There are limits in creating eco-industrial parks: the firms in an industrial park can have similar fields of activity and, therefore, will generate similar products (thus, there will be relatively little ways to reciprocally use the secondary outputs of products and to discuss the reuse of outputs), the firms have limited time to negotiate the transactions necessary to use the non-marketed products of the partner firms in the Eco park (the cost to reach an agreement – and minimizing the risks – can be higher than the value of the material or energies used), the exchange of by-products is an end-of-pipe solution which can diminish the efforts of the firms to restructure the processes or the product design.

The role of resource recovery within an eco-industrial park can be, many times, as important as reaching a high level of efficiency in using regional resources. This group of firms can include: niche firms to capitalize the outputs of some large companies, production firms to use recycled materials, firms which can ensure the reuse of production machines and systems, firms to rehabilitate the equipment used and energy plants to generate fuel or non-conventional energy or regenerating energy.

The appearance and development of eco parks can transform into leverages supporting the concept of Circular Economy. The concept of Circular Economy

emphasizes the benefits of utilizing residual waste materials through the development of some complex interconnections between firms (Jacobsen 2006). The implementation of some circular economy elements promotes the minimizing of the amount of discharged waste and the adoption of ecological technologies in the economic processes (Andersen 1997, 1999).

According to Zhao and Lowe, the three main levels of a circular economy are:

- The first level, managers must seek much higher efficiency through the three Rs of CP, reduce consumption of resources and emission of pollutants and waste, reuse resources, and recycle by-products.
- The second level is to reuse and recycle resources within industrial parks - clustered or chained industries, so that resources will circulate fully in the local production system.
- The third level is to integrate different production and consumption systems in a region – area, so the resources circulate among industries and regional systems (Zhao and Lowe, 2004).

#### **4. Management of an eco-industrial park**

An eco-industrial park is a clearly defined area where there are exchanges of materials, energy and information between different companies and local players. Eco-industrial parks can be planned for a totally new field or for operations developed around some already existing economic processes. The quality, continuity and interconnection of flows between the firms of an Eco-industrial park are important characteristics for the success of eco-industrial networks. The trust, communication and management relations are, also important. An Eco-industrial park is the most appropriate for the mature companies in a field among which there are already institutional or collaboration relations.

The management of an Eco park may face different rejection or influence forces. These barriers have been identified and classified by Heeres into five different Types (Heeres et al 2004):

- Technical barriers – when the exchange is not accepted by the community and the interest groups
- Economic barriers - include economically unsound or risky exchanges.
- Informational barriers - arise when the information are not accurately or transparently enough presented by the project initiators.
- Organisational barriers - when the rules of the Eco-park do not match the firms' corporate rules.
- Regulatory or legal barriers.

Eco-industrial parks are entities which can work only based on a very efficient management, a management which starts with the projection stage and, implicitly the finding of some companies which will become partners and which can generate among them connections in utilizing the inputs and outputs. All the management actions of an Eco park converge in the three fundamental directions: economic responsibility, ecological responsibility and social responsibility.

Lowe (2001) identified the main management tasks of an eco-industrial park:

- Finding new forms of cooperation between partner firms and other interest groups
- Enhancing the dialogue between partners
- Maintaining and managing services

- Supporting material and energy flows
- Recruiting new companies
- Improving the environmental performance of the park and companies
- Maintaining an information system
- Linking companies and public organisations

The following debate is related to the way in which an Eco-industrial park is set up: creation and implementation of an Eco-park according to the principles of Circular Economy or the transformation of an industrial park – already existing – into an Eco-industrial park. The successful cases – especially in the USA or Northern countries – have demonstrated that Eco-parks engage a multitude of entities, from regional/local authorities to non-governmental organizations; in their action the objectives and actions of the firm’s management overlap with the community management.

Salonen (2005) presents two management models of Eco- industrial parks: the “major user model” and the “infrastructure company model”. In the first case, a major investor in the area owns the land of the site, leases estates to companies and works as a coordinator. In the second situation, the investors are the shareholders of the company operating in the area. In both cases, the difference from an industrial park is related to the way in which the flows of resources and waste are utilized and managed.

There can be cases when the Eco-industrial network will be built around a powerful company, an anchor tenant which links actors in the park, by-producers or service suppliers. The only condition in this case is that the mission of this corporation and the management strategies lead towards a Circular Economy behaviour.

Another situation occurs when the central entity of this Eco-industrial network is a public agency – either regional or local. The advantage of this organization lies in this public agency’s institutional and legislative capacity to provide political, legislative and institutional support, especially in fields related to the flows of resources and waste reuse. Agenda 21, as an instrument of sustainable development of a community can thus contain such eco-industrial networks.

In spite of all these, we cannot state that there is a template-model for a successful Eco-industrial park. The framework –conditions for Eco-industrial networks are considerably different from country to country and within them. It is important to evaluate the needs of the community and of the partner firms and according to these to create a model of sustainable park. The parks should be integrated in an innovation regional framework which recognizes the characteristics and the innovation qualities of the environment in the region and, also the local government competences and capabilities. Regional-local authorities, other institutional entities and firms interested in developing a park should create together an organization basis.

## **5. Conclusions**

The experience of classical industrial parks, which put together firms with interests, with totally different corporate culture and managerial procedures and strategies, provide us with a multitude of successful or unsuccessful examples given by a poor business environment, pollution, traffic congestion, irrational exploitation of resources. The fact that over 75% of the Europeans live in the urban area has led to the increase of pressure on the local resources, including these industrial spaces

where the enterprises are or should grow and become prosperous. Although there are many industrial parks which are developing (as demonstrated by economic indexes), they operate in a totally unsustainable manner. This growth is generated precisely by an irrational and excessive exploitation of the resources of the area/region. Eco-industrial parks do not come to fill these drawbacks, yet they determine local community/ interested parties to consider the development strategy of the area and of the firms involved in accordance with the principle of rational joint use of the resources it has. The capacity to innovate and intensify the relations between different players is the main feature of this new approach.

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## PARADOXES OF MODERN STOCK EXCHANGE MARKETS

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**Abstract:** *In this article we propose an easy approach of stock exchanges and their impact on the real economy. The paradoxes of modern stock exchanges are commonly understood as opinions that contradict the generally accepted truth and therefore are considered absurdities or huge enormity by the majority of the population.*

*The paradoxes are essentially based on logical arguments that sometimes can lead to contrary or contradictory conclusions (depends on the situation) of a truth already known and accepted. In connection with capital market, through this approach we try to highlight a few aspects that come out from everyday life, breaking the monotony of theoretical resolutions.*

*We can associate anomalies in trading financial instruments with prove that financial markets are inefficient. They can be highlighted best on the developed financial markets. Through their specific, there are anomalies in a stock market that demonstrates either that the market is inefficient or that there are some discrepancies regarding certain asset price formation. If we talk about market inefficiency hypothesis, it is demonstrated that in that market, the efficiency of the market is not verified or partially verified. It has been shown that such anomalies tend to diminish or even disappear in time, thereby reducing or even eliminating the profit opportunities of the investors who speculate on them (Schwert, 2003, p 940). The stock exchange anomalies, especially those with a direct impact on the financial instruments price which are traded on stock exchanges, are likely to offer investors the opportunity to obtain above-average market gains, in term of a proper management.*

*To assess whether or not the phenomenon can be considered as a stock market anomaly, it must be compared with a normal behavior or with a normal model. In addition to the main categories of stock market anomalies that we identified (calendar, technical or fundamental) a paradox of recent years in the investment in stock market is the high-frequency trading (HFT - high-frequency trading), this requires a ultra-fast trading of the securities, using special algorithms but also highly advanced technologies. The effects of very rapid extension of these practices are reaping huge profits in fractions of time increasing fraction of time here, and more than that the pronounced weakening of the link between the stock market and the real economy.*

**Keywords:** *stock market paradox; high-frecquency trading, january effect, weekend effect.*

**JEL classification:** *G02; G12; G23;*

## **1. Abnormalities in the financial instruments trading through stock exchanges.**

Although that in the history it can be identified moments when stock exchange abnormalities seen in terms of inefficiencies in financial markets, it does not mean that they are repetitive or that the frequency of their event follows a certain logic. Thus, investors should be aware of this aspect when they are setting their goals and hopes of winning.

Stock market anomalies and the moments when they occur are identified primarily by investors who closely follow the market and its evolution and also by the researchers in this field. They can see more easily the moments when the evolution of stock prices emerges from what is "normal" and thus creates opportunities for those who observe them. When identifying these situations, they have basically two options to proceed: either they warn that market actors about the findings or take the advantage of market inefficiencies and speculate marking the additional profits into their accounts. In most of the cases their choice is obvious, namely to speculate and take advantage from the opportunities of the market, but whatever their option is, the result is always the same: mitigation and disappearance of the market anomalies.

From our point of view, the anomalies encountered in the financial markets or stock exchanges, can be viewed in terms of time (calendar anomalies), in terms of technical analysis interpretation (technical anomalies), in terms of assessment relating to fundamental analysis (fundamental anomalies) or abnormalities related to other issues. This article addresses only calendar anomalies and high-frequency traders practice. Technical anomalies and fundamental anomalies will be addressed in another article.

## **2. Calendar anomalies.**

Calendar anomalies as apparent from their name, refers to the situation of financial markets inefficiency that can be seen at certain points in time and broadly in line with a temporal logic. The best known such anomalies are weekend effect and January effect. But besides these anomalies we can talk about vacation days anomalies occurring after Halloween, quarterly anomalies, effects in the same calendar month, the Monday effect which is often seen in connection with weekend effect, the effect of intraday trading (in one trading day) or anomalies seen in years ending with the digit "5".

### **2.1. The January effect.**

January effect means that most stock of the world and especially those of smaller capitalization generated high yields (unusually large) in January.

According to Robert Haugen and Philippe Jorion: "January effect is probably the best known example of aberrant behavior encountered in financial markets, around the world" (Haugen & Jorion, 1996). Those two concluded that small cap stock markets have generated higher returns than large capitalization stock markets, the difference between the two categories of stocks being given by the January effect. The smaller capitalization stock exchanges recorded substantial increases of prices of securities listed, in the first 10 trading days of January.

January effect creates great opportunities for speculators, who will buy listed securities before the month of January, and who are expected to sell in this month

with the added value determined precisely by this effect. January effect means therefore initiating long positions before the end of the year at lower prices, and selling them in January at a higher price, the difference between the two prices is the investor's profit.

Like any financial market anomaly, the January effect is seen as a form of financial market inefficiency. But according to the theory of efficient markets, it should go away with the passing of the time. At least so far that has not happened, although some researchers argue that the effect diminished over time (Haugen & Jorion, 1996).

January effect was first observed in 1942 by a banker - Sidney B. Wachtel (Haugen & Jorion, 1996), and the explanations that have been made over time were mainly on the willingness of investors to avoid additional pay taxes on gains from the stock market. Thus, in case of relative losses on financial titles, investors will sell those securities and will assume the loss, for reducing the taxable amount at end of the year. Massive sales of financial titles determine the decrease of securities quotations and also the decrease of prices in the market. However, the same investors will proceed to purchase even of the same titles, in early January, resulting in an increase of prices. The fiscal aspect is discussed by others (Jacquillat & Solnik, 1997, p 70) with the same meaning. Of course, we can find explanations also in the willingness of investors to liquidity their portfolios before the end of the year, so before the winter holidays (for expenses incurred by them). We believe, however, that sales resulting from this last reason do not influence the stock market prices in a very high level, this is because the amounts are insignificant.

Regarding the aspect of taxation, the January effect has been demonstrated by empirical studies on markets in the UK and Australia, countries with fiscal year not ending on 31 December. Therefore, the explanation of "tax-loss-selling" is not credible in this case, which makes us believe that there are other factors influencing the investment process, which causes this effect.

Jason Fink, Kristin Fink and Godbey Janathan analyzed the existence of January effect from the perspective of the size of the company issuing the securities listed and which achieves an improved performance in the months of January (Fink, Fink, & Godbey, 2008). They concluded that smaller companies recorded higher performance in January than the other. Also, in the same study was included another variable - the age of the company (the period since its shares were listed on stock exchange) which seems to have a major importance in the existence of this anomaly. The January effect has been studied by Rozeff and Kinney in 1976, Roll and Keim in 1983 or Lakonishok and Smidt in 1988 (Fink, Fink, & Godbey, 2008), which was tested on many of the world's financial markets. Investors around the world are aware of this anomaly and try as much as possible to take advantage of the opportunities that it creates. Among brokers say that a particular market performance in January predicts a good performance for the rest of the year.

## **2.2. The effect of the end of the month.**

Empirical studies show that it can be observed an increase in yields of listed securities at the end of any calendar month. This aspect was studied by Lakonishok and Smidt in 1988. Their analysis included daily values of the Dow Jones Industrial Average over a period of 90 years, the purpose being to test the existence of seasonal patterns in the rates of obtained return (Lakonishok & Smidt, 1988). Those

two concluded that anomalies can be observed in terms of profitability obtained at the end of weeks, at the end of month, end of the year and around the holidays.

In 1996, Chris Hansel and William Ziemba showed that the effect of the end of the month can be determined by paying of the wages or interest (Hansel & Ziemba, 1996). With extensive study on the analysis of the daily values of the S & P 500 over 65 years (from 1928 until 1993), they concluded that the returns generated by the increasing quotations at the end of the month are significantly higher than their annual average. Their demonstration suggests that investors can take advantage of this anomaly and buy securities before the beginning of a new month, with a few days earlier and then sell them a few days after its beginning.

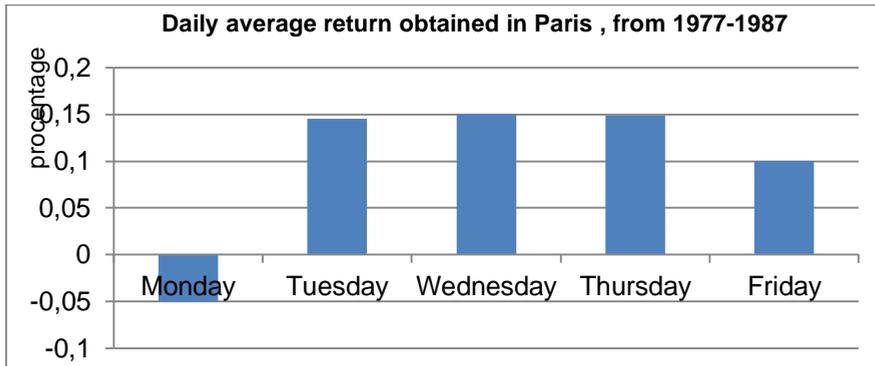
In 2006, in Xu and McConnell's article, which was awarded with the Graham Prize- "Equity Returns at the Turn of the Month", the authors studied the phenomenon for a period of 80 years (from 1926 to 2005) for the Dow Jones Industrial Average (Xu & McConnell, 2006). The conclusion they reached is that the last trading day of a calendar month and the first three trading days of the next month offers higher returns for listed shares than the average annual yield. Those two have demonstrated that the effect of the end of the month seems to be more pronounced in the years after 1986.

From our perspective, the effect of the end of the month is a challenge for what means the rational behavior of investors in the financial market.

### **2.3. The weekend effect.**

The weekend effect was first studied by Fields in 1931 when transactions could be concluded on Saturdays (Fields, 1931). The same Fields showed in 1934 that the Dow Jones Industrial Average shows a tendency to increase the day before holidays. The weekend effect has been studied by many researchers, and the first to correlate this effect with the schedule as it was manifested was Lawrence Harris in 1986. He showed that the weekend effect tends to occur in a significant extent in the first 45 minutes of trading on the day of Monday. Besides, Monday morning seems to be one of the days of the week in which the quotations recorded decreases in value (Harris, 1986).

The weekend effect is often treated in the literature with the Monday effect. The two effects basically relate to the same thing. Hamon and Jacquillat demonstrated in 1988 that Monday seems to be the worst day for investment in shares (Jacquillat & Solnik, 1997). The study realized by them, was based on daily historical values of AFFI SBF index for the period 1977-1987. They found that the average return achieved on Monday was negative and in all other days of the week in which it can be concluded transactions on the stock exchange, the return was positive. For data series, the authors considered the daily opening value of the index.



**Figure 1. Daily average return obtained at Paris Stock Exchange, from 1977-1987**  
*Source: processed after (Jacquillat & Solnik, 1997, p. 72)*

This anomaly involves at least an interesting explanation. The weekend effect appears to be the result of the tendency to publish negative news on Saturday or Sunday. Bad news about the market likely to influence its development, mainly occur on weekends. Another possible explanation of this phenomenon is based on the general state of the market participants. It was found that the mood of the people is better, more optimistic on Fridays and on days preceding holidays. On Mondays, the mood of the people in general tend to be more pessimistic, morose. Rendered in the investment area, these states generates reactions as: increasing quotations when the market is dominated by optimism (due to boost buying transactions) and decreasing quotations when market participants are dominated by pessimism (in this case they sell more).

#### **2.4. Another calendar anomalies.**

Besides already exposed calendar anomalies, there were also identified other effects, but at least for now those are remaining in the study of researchers in this field. Thus, according to an analysis company of stock market trends it seems that there is a anomaly on the returns obtained from investments on the stock market in the years ending with the digit "5" (<http://bigcharts.marketwatch.com/>, 2012) . At least apparently, the Dow Jones Industrial Average level seems that the years ending with the digit "5" bring positive returns to investors. For example: 2005, 1995, 1985. This notice is not valid for years divisible by 5. The yields include in the company analysis both the DJIA index value at the beginning and at the end of the year and also the dividends of listed companies which are taken in the calculation the DJIA.

A brokers adage vis-a-vis investment on stock exchanges, which is already famous, says: "Sell in May and go away". Like any saying, this was basically the result of many experiences from brokers, which showed that the period between November and April is characterized by significantly stronger increases than in other months of the year. November usually brings gains for stock market quotations, its beginning is often associated with Halloween (which takes place in late October). Investors can use this effect to achieve higher returns than the market average, so they will buy listed shares in November and will sell, according with the hypothesis, in May. Bouman and Jacobsen have studied this phenomenon which they called the effect of Halloween (Halloween Indicator) and showed that their hypothesis is confirmed for 36 of the 37 countries surveyed, and the market in which this phenomenon can

be observed best is the London market (Bouman & Jacobsen, 2002). This anomaly has been studied also by Maberly and Pierce in 2004, and the conclusion they reached was that the returns obtained from investments on the stock market in many states were mostly negative or smaller in any case, in the months between May and October comparing with the short-term interest rate (Maberly & Pierce, 2004). So the conclusion reached by Bouman and Jacobson's and also the conclusion of Maberly and Pierce, is in fact a contradiction of the theory of efficient markets, and till now the reasons for determining this phenomenon are unclear. Therefore remains space for further research in this area.

An interesting anomaly is at least that of Mark Twain, which bears his name - "Mark Twain Effect". He noted that the yields obtained in October, from the stock market investments are lower than in any other month, and that's why he said: "October is one of the most dangerous to speculate. The other are July, January, September, April, November, May, March, June, December, August and February". Mark Twain not only draws attention to the low yields that can be obtained in October, but from his conclusion, he draw attention to speculation in general - it is extremely risky at any time when is initiated. A proof that the above is true is that the biggest crisis of the world began in or around October: 1929, 1987 or 2008.

### **3. High-frequency traders**

Trading with so-called high-frequency traders involves the use of sophisticated technological tools and of trading algorithms for trading the financial securities, in an extremely fast way. This type of transaction is made using advanced computer programs, and that's why the open positions are held only for a few seconds or in some cases even less (a few milliseconds). With this method it can be made a lot of transactions in a short period of time. High-frequency traders do not keep open positions from one day to another, therefore all the transactions are intra-day. A huge focus in this type of trading is put on transaction processing speed.

The analysts of Advanced Trading have estimated that approximately 60-73% of the total value of transactions made on the stock exchanges in the United States was conducted by high-frequency traders ([www.advancedtrading.com](http://www.advancedtrading.com)) in 2009-2010, this percentage reached at about 50% in 2012.

In essence, the activity of high-frequency traders involves trading in bid and ask of a large volumes of contracts or securities, the profit which they rely on from a single transaction is very small. But the multiplier effect makes this activity to be very profitable, given that they may terminate thousands or even tens of thousands of transactions in seconds. Of course, the profitability of this activity depends primarily on trading algorithm used. Those who use these mechanisms are very careful about the optimization parameters of the trading program, many times the distance between the issuing server and the stock market server, is take into consideration. This is because, as the two are more physically closer, the cross-reactive response time is also smaller. Every second and millisecond in this system is very important.

#### **3.1. Flash Crash**

The day of 6 May 2010 is also known as "Flash Crash" or crash at 2:45 pm, when an incident has made the New York Stock Exchange and the Dow Jones Industrial Average to fall by nearly 1,000 points representing at the while about 9% of its value. This decline was the largest ever recorded in the evolution of DJIA during a single trading day.

Due to the debt crisis in Greece, 6 May was a day destined to massive decreases for most of the world stock markets. If until 2:30 DJIA fell by about 300 points, at 2:32 makes its presence felt in the market a high frequency trader (an algorithm programmed) which was scheduled to sell certain contracts. Due to its involvement and other such algorithms, the downward trend is increasing, so that at 2:41 DJIA had fallen 600 points. At 02:45:28 stock suspended from trading for five seconds the contracts covered by the first algorithm, so after 20 minutes of the resumption of trading, the 600 points were recovered.

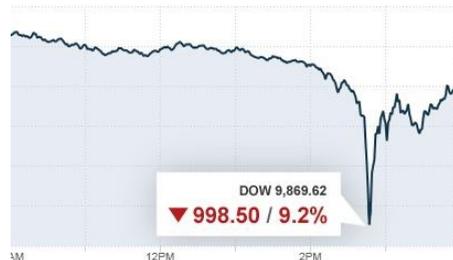


Figure 2. Flash Crash

High-frequency traders can cause enormous risks for the financial system. The consequences of such tradings have been observed in 6 May, when the Dow volatility has been excessive. This was the reason for that, many European countries have resisted approval of such practices. Angela Merkel, the German Chancellor has proposed a new legislation with clear control for high-frequency traders. The limitations were clearly exposed to german traders in the market, any infringements involving penalties and fines. The aim of the initiative was to limit the risks associated with the high-frequency trading.

#### 4. Conclusion

The existence of anomalies in financial instruments trading shows that financial markets are often inefficient or that those markets are some inconsistencies in the method of determining securities prices. The literature shows that such anomalies are attenuated over time or even disappear, also disappearing with them the profit opportunities of those who speculate trading financial securities based on those anomalies. By their nature, anomalies identified in the trading of financial instruments have a direct influence on prices, thus they are creating clear gain opportunities for speculators.

Anomalies in trading financial instruments are associated with the moments when the security prices deviates from the normal meaning, creating opportunities for those who identify them. These can be viewed from the perspective of time, in which case we can talk about calendar anomalies, in terms of interpretations of technical analysis, when we talk about technical anomalies, and in terms of performances given by the fundamental analysis, when we talk about fundamental anomalies.

Regarding the high frequency traders, we believe that it is required a special control for this type of automated trading because the destabilizing effects it generates in the market may be from the most serious.

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## NEW DIMENSIONS OF BENEFITS AND RISKS TO BUSINESSES IN THE EUROPEAN UNION MARKET

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**Abstract:** *The European Commission said that the economy of eurozone will decrease by 0.3% this year and will grow by 1.4% next year, with job cuts, shortage of investment and still tight lending conditions delaying the recovery. In the European Union as a whole, GDP expansion is projected at just 0.1% this year and 1.6% in 2014. The paper aims to identify the types of risks that a company faces when entering the European Union's market. Risk may be defined as an uncertain event that may have a negative effect on achieving objectives and risk management can be defined as the process that identifies analyses and accept or mitigate the uncertainty in business decision-making. Well designed and implemented, risk management programs are the source of competitive advantage for businesses in the European Union market and this way the operating costs can be reduced, quality and product reliability can be improved, staff productivity can increase. It is very important for any company to be aware of potential risks as this will help to assess, to prioritize and to protect against the risks that may arise. Some of the potential risk can destroy a business, while others can cause serious damage that can be costly and time consuming to repair. After the company have identified the risks, they must be prioritized in accordance with the companies assessment of their probability. The European Union expansion is ongoing and it is a major market place. Doing business on international level has always been about managing the unique risks which global markets pose. For many companies that intend to do business in Europe today, the risks are so varied and complicated that a risk management strategy is necessary and must be carefully tuned and revisited on a regular basis. There are many advantages when starting a business in the European Union. When participants and investors enter a new market should remain vigilant about risks.*

**Key words:** *risk, European Union, business, market, risk management.*

**JEL classification:** **G3**

### **Introduction**

In this moment of time, to maintain competitive advantage, companies are on a pursuit to expand the market share. Therefore, to achieve this purpose most companies have used globalization as a strategy.

Globalization refers to the elimination of barriers to trade, communication, and cultural exchange.

There are many reasons why a company ventures into foreign markets, such as:

- to spread business risk across a wider market base;
- to achieve/maintain core competences;

➤ to lower costs and enhance companies' competitiveness;  
to gain access to new customers- expanding into foreign markets offers potential for increased revenue, profit and long-term relationships and growth, and becomes an especially attractive option when a company's home market is mature.

***To enter the European Union market companies must consider the following objectives:***

- understanding the hindrances a firm might face while entering the EU market;
- studying the response towards the advent of the company in the new market;
- focusing on the customer taste and needs of the market;
- understanding the market strategies adopted by the top competitors;
- analyzing the EU market potential and market players.

In a study by the Economist Corporate Network, The Economist Intelligence Unit in cooperation with the company Marsh Romania, given the low level of knowledge of risk were developed four reports that highlight the challenges of risk management faced by the European companies. Each report covers a different field of risk business. All areas are particularly challenging in terms of aligning national legislation with the European Union legislation and the potential costs of failure or risk mismanagement have important effects.

**These four risk areas for European companies are:**

#### **Product liability and consumer protection**

European Union legislation on consumer protection and health includes 14 directives dealing with issues ranging from product liability to advertising. None of the new member states will benefit from transitional periods for implementing the legislation. According to those directives, producers are responsible for damages resulting from any aspect of the product. If it fails to be identified, each supplier of the product is responsible.

An EU directive on product safety came into force on 15 January 2004 and applies in countries that acceded on 1 May 2004 and acceding countries.

European Union legislation on food includes dedicated special regulations and control, how the labeling, additives and method of packing, practices local regulations differ greatly from the new member states.

#### **Health, safety and human resources**

The European *acquis* describe a very complex legal framework, consisting of 40 directives for all industries and services.

The judicial and administrative bodies shall establish national monitoring and recording complaints from staff. Employers' liability will rise to the EU member states. In a survey conducted in 2012 by the European Foundation for the Improvement of Living and Working Conditions found that there are major differences in this area between the EU states and accession countries. 40% of employees felt accession countries that are exposed to health risks and personal safety at work, compared with only 17% of EU employees who had the same opinion.

## Environment responsibility

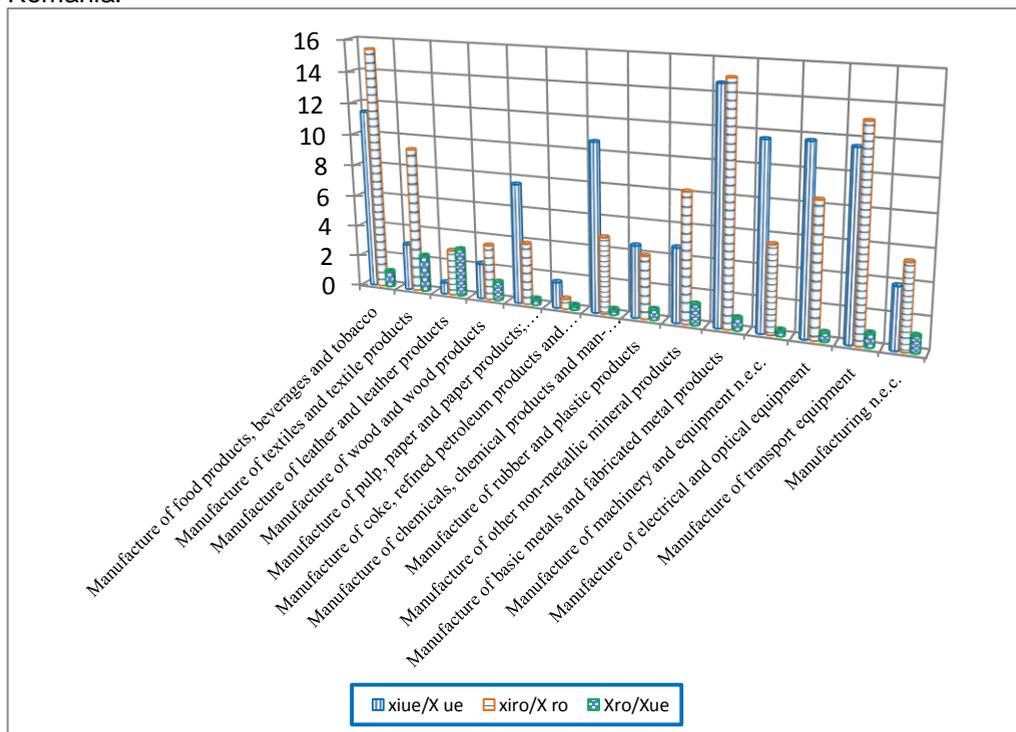
Adopting environmental acquis will require an investment estimated at 120 billion euros for the last two waves of accession countries.

In many cases, the acquis will require more stringent emission standards for hazardous waste management practices associated with handling and final disposal of all waste materials. Heavy industries such as chemical, energy and metals, will have to meet licensing requirements for pollution control as specified in the Directive on the prevention and control of pollution. Compliance with this directive will result in increased costs.

Environmental legislation is a goal of future changes. Regulatory changes will include "*Environmental Liability Directive*", which was adopted in the spring of 2004 and which, once implemented, could lead to an increase in the liability for contaminating activities and natural resource damages.

He also proposed a "*Directive on chemicals*", whose purpose will be to anticipate registration procedures and security assessments for companies that annually sells more than a ton of chemicals.

Romanian manufacturing production structure towards the EU industry is disadvantageous from the point of view of environmental pollution. The following figure shows a comparison of the position of various sectors in total manufacturing in Romania, the share of EU27 and Romania to the EU, the components of this industry, highlighting the fact that large polluting industries have a large share in Romania.



Comparison between Romania and the EU27 the value added and the share of manufacturing components in total and Romania share in EU27 in manufacturing industries in 2007

Source: EUROSTAT, Annual detailed enterprise statistics on manufacturing (NACE Rev.1.1 D), 06.03.2012

### **Managers' liability**

After several scandals during the global financial crisis in 2008 and 2010 that affected certain corporations, liability of directors for the company's shares began to attract the European Union' attention.

The action plan of European Union financial departments are seeking to create an EU-wide integrated capital market and to introduce International Financial Reporting Standards. The EU also plans to develop a guide of corporate governance. All this could lead to closer monitoring of shareholders and the directors' accomplishment of legislative tasks for the companies that are registered in Europe.

The failure to comply with EU legislation puts CEOs in vulnerable situations from litigation and penalties. Improved knowledge by consumers and employees on their rights will further strengthen this trend.

### **Risk management in Romanian companies**

Business was, is and will be exposed at risk. Risks are related to the complex nature of business. They cannot be completely eliminated but can be known, assumed and make them reduce adverse consequences. Lately, there are stands from which comes a warning in Romania: risk management should be on every manager's agenda.

Risk management is the natural consequence and the scope for other two essential steps: their *identification* and *hierarchy*, namely prioritizing their approach in the company. Hierarchy it is according both to frequency and impact severity on business. Follows the potential impact quantify of these risks on the business.

When a company has a clear picture of the risks to which they expose and they know the hierarchy, they decide which risks they want to manage. Risk management refers precisely the measures that a company has taken on the identified and hierarchical risks. Risk reduction measures should be the first step. It's the risks that a company decides to keep them and take them because they have the financial capacity that allows withstanding certain risks.

The next step would be the risks transfer that cannot be controlled by a third party who is actually called an insurance company. It is about the risks that the company decides that it cannot work those who cannot be assumed, because it would be a major impact on the business. The company transfers those risks to an insurance company against a takeover premium are the insurer risk price. The insurance benefit is that a company protects its business, protect their balance sheet and the impact cannot destabilize the company.

In Central and Eastern Europe and in Romania four risk categories occurs frequently:

- operational risks;
- strategic risks;
- financial risks;
- hazard risks.

*Strategic risks* may affect the company's activity and may lead to failure to achieve business objectives, *operational risks* are related to dependence on a company's processes, people and products, *hazard risks* are risks associated with natural disasters, accidental destruction of property or injury to employee termination

business, while *financial risks* may affect the company's results through exchange rate fluctuations and interest rate.

In Romania, 10% of companies that suffered a significant financial loss in recent years do not have yet a plan for crisis management.

Almost half of the companies in Central and Eastern Europe have not a clear strategy for incorporating risk management into their work. Most managers recognize that they have not implemented robust procedures in strategic risk management.

Companies from Romania and Central and Eastern Europe are not yet concerned with regulations coming into effect or have come into force upon accession to the European Union and its implications for company activities. To avoid possible sanctions, companies in the new member states should be familiar with an impressive volume of regulations and policies and ensure that their activities are conducted in accordance with them.

Economic and financial risk, the consequences of worrying economic environment, places Romania on the last place from 37 European countries<sup>1</sup>.

For Romania is important that political parties, government, democratic institutions have assumed leadership of the Romanian economy and society to establish and promote safe and effective economic structure, to develop policies in line with national interests.

## **Conclusions**

In time, increased competition may cause significant changes in the structure of markets in Europe. For the first time insurance buyers will have direct access to insurance products available in all EU member states. Externally, insurance providers will be able to attack the market share of local operations, without the need of efforts for the establishment and registration of new businesses.

Given this, international insurance companies will try to gain reputation locally, but could be cautious about the short and medium term strategies. In addition, do not have the local infrastructure to process large numbers of policyholders. In practice, it is assumed that foreign insurers are initially attracted by large corporations in the region, international presence, specific expertise and new insurance products will be the most attractive.

If companies want to make shelter from the risk of non-compliance and reduce the impact of future legislative changes, it is essential to understand and take account of the four risk areas identified in the study. But an effective risk management is not only to avoid disaster, but has the potential to create a competitive advantage. Companies that have an effective risk management are more attractive candidates for investments and acquisitions, and companies with a clear vision of the benefits arising from good risk management are more likely to generate sustainable development. With EU accession, a more efficient risk management may prove to be one of the most important benefits.

Activity of foreign direct investment has a positive impact on overall trade balance of Romania, concurring with 72.4% of the total Romanian export and import by 62.5%. It is known that the overall trade balance, recorded in chronically considerable deficits. Exports and imports foreign direct investment enterprises were significant

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<sup>1</sup> www.marsh.com

share of the total ones. FDI enterprises trade balance registered deficits, but the situation is highly differentiated between branches.

Branches with trade surplus were: transportation, metallurgy, machinery and equipment, wood products, including furniture, textiles, clothing, leather goods, computers and other electronics, and the deficient - oil processing, chemicals , rubber and plastics and, contrary to expectations, food, beverages and tobacco, as shown in the annex.

#### Annex: Exports and imports of foreign direct investment enterprises 2010

-milion euros-

	Exports (FOB)		Imports (CIF)	
	FDI enterprises	% of total branch	FDI enterprises	% of total branch
<b>TOTAL</b>	25.950,0	72,4	28.181,0	62,5
<b>Manufacturing:</b>	21.934,0	61,2	18.849,0	41,8
– Manufacture of food, beverages and tobacco products	314,0	0,9	978,0	2,2
– Manufacture of non-metallic mineral products	139,0	0,4	265,0	0,6
– Manufacture of products of wood and furniture;	1.223,0	3,4	396,0	0,9
– Manufacture of computers, electronic, optical products and electrical equipment	3.652	10,2	3.426	7,6
– Manufacture of machinery and equipment n.e.c.	1.020,0	2,9	546,0	1,2
– Manufacture of basic metals	2.725,0	7,6	1.572,0	3,5
– Manufacture of motor vehicles, and transport equipment	6.713,0	18,7	4.820,0	10,7
– Manufacture of coke and refined petroleum, chemical products, rubber and plastic products	2.947,0	8,2	4.414,0	9,8
– Manufacture of textiles, apparel and leather	2.983,0	8,3	2.095,0	4,6
–Other manufacturing activities n.e.c.	218,0	0,6	337,0	0,7

Source: BNR, INS –"Romanian foreign direct investment in 2010 year ", 7 november 2011

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\*\*\* [www.marsh.com](http://www.marsh.com)

\*\*\* [www.investopedia.com](http://www.investopedia.com)

## THE ANALYSIS OF THE REAL ESTATE INVESTMENTS IN THE CURRENT ECONOMIC ENVIRONMENT

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**Abstract:** *Real estate investments are one of the most attractive business opportunities in the context of the contemporary economy, generally marked by economic recession and especially by monetary and financial instability. Last years international reporting concluded that deepening the global economic crisis determined an increase of the real estate request, while despite all expectations one did not assist a crash of the prices. Economic reality showed that real estate assets value (buildings, land) kept proportions with economic reality over time. A comparison between stock exchange market and the real estate market shows that while an movables investor (investments in stocks, bonds or life insurance) might lose completely his initial investment, the investments in real estate assets, such as buildings, would keep their quality as goods and would also keep a value to better resist shocks and thus allowing an increase of the capital. When appreciating the value of an investment the first things to analyze are the return, liquidity and risk criteria, which are essential in real estate investments too. Stimulating real estate market must be not only a wish but also a reality of global economy, since it can correct many of the aggregated indicators of a country. Containing scientifically detached from economic practice, this article is addressed to readers with interests in real estate investment. The language is usually referred particularly to the qualitative side of the real estate market approach. The feasibility of the real estate investments is being conditioned by their capacity to generate important profits, on the background of the reduction of the duration of recovery of their value. The economic instability from the last couple of years has generated fears and failures but, paraphrasing Johann Wolfgang von Goethe, courage is a mixture of genius, magic and power that helps us succeed in everything we set our mind to. The investments on the real estate market usually have a long period of recovery, compared to the placements at the stock market or to the commercial business. The structure of investments in the field of real estate is complex and depends on several factors: the fiscal and financial policies of a country, elements that are specific to the constructions sector, the fluctuations of the real estate market, the development degree of a nation, the free circulation of people, the evolution of the exchange rate etc. The international statistics show that the real estate sector represents one of the most profitable businesses from the last two decades. Even now the real estate sector seems to be profitable, especially for the speculators, in the measure in which there are financial sources and enough information about the market.*

**Keywords:** *real estate investment; return of investment; investment liquidity; real estate investment risk; fair value; real estate market.*

**JEL classification:** *D50; E22; M40; M42; R30; R31.*

## 1. Overall considerations

The start of global crisis generated major changes in the policies of economic entities and development strategies because the new context and the intervention factors in the market changed radically. The economic trends, that seemed unshaken before 2007-2008, started shaking until they had no value, at least in the present conditions when the vectors of the economic action are still confused.

Investment markets which had become during the last decade a tax haven for potential investors used to financial speculations became inert, weakly volatile, beyond the liquidity they had known so far. And so investors recently assuming financial risks and exponential increase benefits of financial transactions too, withdrew one by one from this scene leaving well-known stock exchanges in lethargy and with no hopes of quick recover. In economic theory there is proved that in conditions of a global crisis, the first deeply affected markets are the financial ones, especially the stock exchange markets, and they are the last to react to the economic increase. In other words, „first out, last in“. The stock exchange, a very attractive tax haven for experts, is the first link of an economic chain to feel the crisis shock and the last to react favorably and intensively to the economic increase of a state. The financial analysis indicate the fact that the cycles of the real estate market are in an inverted relationship with the evolution of the prices and they can extend on periods of time between two or three years and up to 20 years. The frequency of the two opposable markets – stock exchange and real estate – could be hardly balanced to reduce the difference between them. This is the fact influencing the interest of the investors to pass from one field of investment to another when it is necessary to increase the efficiency of the savings and returns. *In an empirical manner it was observed that the real estate investments have a sinusoidal trajectory, that is closely related to the **regularity** of the national economies, of the global economy in general, but the amplitude of the fluctuations is attenuated compared to the evolution of other economical segments. The financial analysis indicate the fact that the cycles of the real estate market are in an inverted relationship with the evolution of the prices and they can extend on periods of time between two or three years and up to 20 years.*

For decades we have been witnesses to the everlasting phenomenon of balancing between stock exchange and real estate investments. When the stock exchange has a downward, instability trend, the investors give up their “unreliable” shares in favour of real estate buildings.

Years before, the history of economic thinking pointed out that economy is inherently cyclic, meaning no matter the class of human society, it can't keep developing in one way (increase or decrease). In this context, the crisis should not be seen as a frightening phenomenon but as a state, a part of economy seen as a whole. Albert Einstein claimed it was good “not to ask things to change as long as we do the same. Crisis is the most blessed situation that can appear for countries and people, because it means progresses. Creativity is born of the necessity as day follows night. In crisis inventions, discoveries and big strategies are born. Without a crisis there is no duel, without a duel the life is a routine, a slow agony”.

What can be truer than the novelty elements which are always sources of surplus value and of distinction on the market, regardless of its phase: release, growth, maturity or decline?

## **2. Features of the real estate market**

The real estate market has many characteristic features and that imposes prudence and an analytic way of thinking from the investors:

- the real estate properties have a reduced liquidity degree because they involve complex procedures of transfer of the right of property and transactions with large amounts of money.
- the prices of the real estates and the decisions to buy or to sell are significantly influenced by the financing offers of the creditors, by the volume of the offered credits, by the financial costs, by the size of the deposit, by the duration of the reimbursement.
- the high value of the real estate properties takes time to analyse the financing manner and to check the reliability of the clients, and this leads sometimes to the missing of opportunities.
- through their nature, the information regarding some similar transactions are not available immediately, and for this reason the real estate market can be considered an imperfect one.
- the real estate assets have a long life-duration, that can be measured in centuries sometimes.
- from an accounting point of view the value of the lands cannot be damped, but the value of the buildings is damped in time.
- each real estate property is unique through its geographical location, its emplacement, usage value, dimension and financing form.
- the buying capacity of the investors has to be big, because the value of the real estate assets is high.
- the real estate market is characterized by important fluctuations of prices, due to their sensitivity to the establishing of the incomes, the unemployment rate, the size of the wages income, the evolution of the exchange rate, the interest of the investors.

The Russian researcher E.I. Tarasevici (2011) considers that the real estate market is an essential element of any national economy. In his papers he emphasized the belonging of the real estate assets to the category of merchandise and the close correlation that exists between the real estate market, the attraction of financial capital and the way of using the resources that are involved in this field.

Knowing the stage of the real estate market is a compulsory condition for the elaboration of the strategy regarding the real estate investments. An effective investment policy means the capitalization not only of the opportunities that exist on the market, but also a good evaluation of the investment objectives, and the adoption of some preventive measures of the potential threats generated by the installation of a negative dynamics of the market. Such an approach allows an evaluation that is well fundamented of the potential risks and the development of an investment strategy that is based on an optimum diversification.

## **3. Real estate - gold mine for investors solvable**

The real estate market became lately an interesting alternative for potential investors. Investing in buildings and slightly in land ensures the capital a good a long time protection against monetary erosion. Real estate investments are a very attractive business opportunity, based on the latest political, social, economical, legal

and financial evolutions as the reports and analyses in the filed show. For potential investors they might be the object of adopting the best strategies for the future.

Any investor knows that during crisis he can make the best investments. A Fata Morgana of real estate market, in a negative cycle, is hunting the minimum. Why? Because no one knows which is minimum and when it is reached.

Real estate investments have *many advantages* for potential investors because they are firstly long term patrimony elements, bringing extra incomes that contribute to meeting the needs, improving the quality of life long after the professional activity ends.

Even if risky, the decision of investment is supposed to have willingness and determination as triggering elements. Regardless the investor's level, experienced or beginner, he can immediately see the way to cleverly invest, with no previous important treasury. There are few persons affording to purchase a building and pay in cash, because the value of a building most often needs important savings and this is an impossible condition to most active people earning insufficient money to anticipate some major investments. Saving almost half of monthly income to open a bank deposit in order to purchase a house is a long time process, sometimes impossible and inefficient.

The financial credit is the solution to this problem. On condition of respecting the terms to pay debts back in time and totally, anyone could purchase a house and use it by means of loans.

At the end of credit period, the buyer is assured of owning the good and passing it to his descendants.

Selecting from specialized studies, we can point out the advantages of locative placements. "The stone", as an expert in real estate market said, is a respected investor of savings, the only one able to generate credit, despite all other investment forms (shares, bonds, life insurance etc.). By this loan we avoid the necessity to create own treasury to ensure the money for buying the building and we can set up gradually a solid patrimony as we pay back the debts. So a first advantage of real estate investments is to make up for the entire amount by long term credits (up to 30 years) and these credits are now in many countries more and more attractive due to low interests.

Despite all ups and downs, the real estate market has been growing for the past 15 years. Unlike a company current on stock exchange, when the investor might lose his initial investment once the capital market crashes, "the stone has a safety net". The advantage is that the capital assets are firstly goods unlike securities which are "a piece of paper" with a virtual value. When every thing goes well, the immovable asset serves its basic goal, to house one or more people.

An advantage of locative buildings bought on quality criteria, meaning "best location", in a good neighbourhood and connected to all facilities (public transportation, stores, schools, electricity, running water networks, sewerage system, resting centres) is that they will create value over time better resisting to possible market shocks, no matter what caused them.

Locative placements have also the advantage to provide a future income that might add up the pension income. At a current acquisition, the immovable assets generate a lower income, but as the credit is paid back, the building keeps its value.

Economic reality shows the buildings' prices in crisis don't drop as much as believed and this is the result of the exchange rate. Generally speaking, the buildings' price increases by every percent the national currency decreases as salaries and other

incomes are paid in national currency and this devaluation is equivalent to lowering the purchasing power and raising prices for houses. One conclusion is that the crisis deepening over the past years have determined a rise of prices in real estate investments not their crash.

Actually the buildings' value neither rises nor decreases but it is directly proportional to its economic utility. One condition to reduce real estate investment prices is to reduce the volume of the bank credits. In absolute amount, these can be reduced either by higher interests or by hardening the credit conditions. The lack of liquidities in the monetary market might lead to imbalance between supply and demand. Although the relation between the two market forces tends to change the price frequently, it is important to say that increasing real estate prices is merely speculative, mainly determined by the potential buyer who gives up on emotion: the express wish for a certain area, the attachment to a pre-seen building, insufficient information about the area prices, lack of time in making up a buying decision etc. Actually *the price must reflect the fair value*, based on impartial criteria.

#### **4. The features real estate investments**

Regardless of the geographical position of the investor, as it is well known, the value of the real estate investments as well as all investments must be estimated based on the following criteria:

- **Return on investment;**
- **Liquidity of the investment;**
- **Investment risk.**

**4.1. Return on investment**, generally on a placement is directly determined by the "health" of the market. In real estate sector a technical and economical analysis is necessary regarding: the placement type (houses, villas, offices, ongoing investment, land, woods etc.), the state of the asset (age, technical aspects, earthquake resistance, usage and the possibility to change it, access to facilities etc.) or geographical position (cities, capital, villages). As it is about long term investments, analyzing the future return involves anticipating the evolution of the market for a long time, an aspect hard to predict but of a real use.

When it is about preferences regarding the locative investments, the option is *old or new*? A motto worth following is: "A good investment is location". The answer to the previous question depends on the investor's interest and on the advantages created by one or another building.

International experience led to the following conclusions:

Investors direct to *new investments*, thanks to a sum of advantages, the most relevant are:

- National legislation directs to cheaper bank credits, with profitable interest rate for new buildings;
- Getting some important benefits in terms of quality, security, isolation or technical standards;
- Granting guarantees, in some countries up to two years, to cover the risks in case of damages when the investors move in the new building;
- Granting guarantees up to ten years to cover the risk of tightness and building resistance;

- Applying fiscal measures attractive to investors;
- Financial advantages: financial tax-free for 1-2 years, lower notarial expenses, the State grants facilities in case of renting the buildings etc.

In case of old locative buildings the advantages are:

- The neighbour's „karma”, the mirage of old times,
- Location downtown, next to historical sites, cultural and social traditional centres
- Reduce liaisons when negotiating the prices, because the owners themselves make the sale
- Attractive tax deductions,
- A significant number of investors interested in old vestiges,
- Satisfy different requests: wide rooms with high ceiling, small traditional cottages in villages with old history,
- Generate an important return of investment ,
- Lower prices compared to new buildings, although the accommodation conditions and fittings are comparable etc.

Regardless of the choice, *new or old*, the real estate investments compared to stock exchange market represent tangible assets, placed over time in the same location, with a value of usage and meant to self usage or to rent. In the opinion of specialists, the real estate assets are sure assets which even in the most tempestuous situations allow capitalizing and returning of capital. As shown previously in this paper the immovable buildings, if they abide by the legal settlement, they always return important positive benefits.

From an economical point of view, the global capitalization of an investment in this field comes from the summation of the capitalization rates that come from the renting of the real estate and of the valorization rate of the respective good, after the deduction of the expenses made with it.

The capitalization rate that is afferent to the renting is determined as a ratio between the value of the rent and the value of the good. This is bigger in the case of the so called “professional” buildings that have a lucrative destination, than in the case of the real estates that are inhabited or of the agricultural plots. Moreover, it is superior in the case of the areas that are situated in the central parts of the cities compared with the ones from the peripheral areas. Also there are significant differences between the urban and the rural areas.

**4.2. The liquidity of the investment** is another essential coordinate in establishing the area of interest of the future owner. If between the forces of the market the equilibrium is hard to reach, it is understood without saying that the real estate investment floats on a flat line. Even if the fast recuperation of the investment is not an immediate purpose for the investor, still it is a criterion for fundamental analysis. This happens because the value of the assets is determined by the rapport that exists between the demand and the offer that exist on the market. Thus on a market in which the offer exceeds the demand, the liquidity will not be obtained unless there is a great diminution of the price. In the field of the real estate investments, the capitalization can only be directly proportional with the liquidity.

So if it is necessary, it is very important the study of the “lever effect of the credit”, in other words the analysis of the principle of the multiplication of the sum that is brought by the investor as a contribution to the financing of the investment. For

example, at a contribution of the investor of 5% from the value of the financed project, the lever effect will be 20.

The efficiency of an investment depends on the correlation between the liquidity and its capitalization. According to the objective, the investment will have to define the type of capitalization sought: it is recommended to choose between a high renting rate (e.g.: offices) or a good potential to capitalize (e.g. buildings from the big cities that have good fittings and facilities). For a good appreciation of the efficiency it is suggested a fulfillment of the economical analysis with the determination of the financial and fiscal incidence of the selected variables, including the managing expenses, the maintenance, repairs, as well as the taxes and the customs that come with every chosen investment.

In order to answer the question “why is the real estate market considered to be a prosperous one?” we will have to make a synthesis of the previous arguments. The real estate investments, unlike other business, have a rare opportunity to fail, unlike other business where the prosperity can last for a long time or a really short one. Like in any other business, the economical periods that alternate, with positive amplitudes, followed by negative ones, influence the real estate market, but does not produce big fluctuations, so that the good offers last. There will always be a supplier that will meet a buyer. The statistical data prove that the current economical crisis there is a growth engine for the real estate market.

**4.3. The risk of the investment.** Like any other business, behind any investment there is a risk. The investment in the real estate properties imposes precaution measures that will reduce, when it is possible, to a minimum the risk of exposure. The risk of real estate investment aims the following components:

- The risk of gain that is determined by the failure to rent or by the nonpayment of the rent;
- The risk of capital that is related to a diminishing of the demands on the support market, given by the excess of constructions, by the modification of the behavior of the users, by the restrictive regulations;
- The risk of sub diversification of the owned patrimony, given by the necessary sum for the investment, its size being the condition to the access to this type of placement.

We must remember that the risks of the locative investments must be completely considered. As we have shown, the efficiency of the real estate investments is in a direct correlation with the investor’s possibilities to rent the property and to collect the income from the rents. In the conditions of the crisis, prudence must be manifested because in certain areas the finding of tenants is a problem, especially in the regions in which the economical activity is reduced. The prolonging of the periods of no rental coincides with a lack of capitalization of the investments. Another major risk is the fact that although the property is rented, the cashing of insufficient rent does not allow the investor to make the necessary maintenance work and repairs or the integral payment of the monthly installments that come with the loan. Other unwanted situations can be considered the nonpayment by the tenants of the debts from the holiday periods, their entrance into insolvency due to the lost of their jobs, the appearance of the conflicts between the tenants and the landlords that lead to financial and time loses to solve in a court of law the litigations, the appearance of damages and unexpected repairs.

It is vitally important the risk of general capital that is generated by the decay of the surroundings and the decrease of the value of the buildings or of the rents in the area, the appearance of natural risks, unforeseen in the area, the identification of the expropriation risks or the diminishing of the locative demand for various reasons, non known to the investor in the moment of purchasing the propriety.

The specialists recommend the investment in real estate assets with “capitalization” and not in the properties that are the most expensive on the market, because it is considered that in the next 25 years the main source of capitalization will be the revalorization of the property. The study of the profitability of the real estate investments is necessary and it needs prudence regarding their sustainability. For example the construction regulations evolve very rapidly and they tend towards energetic renovations of the buildings. In the moment of acquisition the investor has to integrate into the costs the expenses for the rehabilitation of the buildings and only then he can determine their real efficiency.

As we have shown above the dynamics of the real estate market is conditioned by the banking policies. The reduction in certain periods of the given credits is a real reason for the limitation of the real estate investments. This is due either to the increasing of the harshness of the banking institutions, through the tightening of the criteria for giving a loan, or though their rise though the increase of the interests.

In conclusion behind any investment there is an accumulation of risks. An unwanted risk is the losing of the investments due to different causes. When it is chosen a real estate investment, since the beginning there is a risk of losing it. For this reason, the risks must not be perceived as an obstacle in making the investment, but as a warning for the initiation of its beneficiaries in the good handling of them.

## **5. Conclusions and proposals**

The bibliographical sources that I studied and practical observations have lead me to the following conclusions:

- now the real estate market is the barometer of evaluating the well-being of any nation
- in the real estate field the equilibrium between demand and offer is more difficult to be reached and it is very perishable due to the large values that are vehiculated
- the dynamics of the real estate investments is conditioned by the fiscal, monetary and financial policies, as well as the degree of occupation of the active population
- the real estate investments depend on the real power to buy and on the development degree of the work market
- real estate investments generate benefits after long periods of time
- in many situations the real estate market is overrated, due to the subjective criteria of approaching the problematic content in this field.

The development of the real estate investments is a premision of the global development of the human kind. From this perspective I consider that it is necessary to have a coherence at the level of gouverment policies through the adoption of some transparent and durable laws, through the stimulation of financing and fiscal relaxation, that will support the real estate market and it will offer the bigger chances to the interested investors. Above all the risks the real estate market is a big enhancer of the rise of the national economy. Beyond the obvious benefices brought

in time to the investors, the real estate market is an influent environment for the PIB, a source of reduction of unemployment through the creation of jobs in constructions, a source of incomes for the banking institutions and not last, an important contributor to the state budget. It is no wonder that the newest statistics indicate in the last years an important dynamism of the real estate investors in the poorer areas of the Globe. The internationalization of the real estate investments is a good example regarding the new tendencies of the global businesses. But real estate markets in most countries are not as organized or efficient as markets for other, more liquid investment instruments. Individual properties are unique to themselves and not directly interchangeable, which presents a major challenge to an investor seeking to evaluate prices and investment opportunities. For this reason, locating properties in which to invest can involve substantial work and competition among investors to purchase individual properties may be highly variable depending on knowledge of availability. Information asymmetries are commonplace in real estate markets. This increases transactional risk, but also provides many opportunities for investors to obtain properties at bargain prices. Real estate entrepreneurs typically use a variety of appraisal techniques to determine the value of properties prior to purchase.

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## CAN BUSINESS EDUCATION CHANGE MANAGEMENT PRACTICES IN NON-WESTERN SOCIETIES?

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**Abstract:** *The purpose of this study was to determine the degree to which students from an American-style Business School in Lebanon expect the managerial behaviors that they are taught in the classroom to actually be applied by managers in the Lebanese workplace. Broadly categorized as accountability, gender equity, religious tolerance, consultation and transparency, the authors found little indication that such expectations existed. Even when they could be identified such as with racial equality, their relative strength was so weak that they were barely above neutral on a 10-point scale. What was perhaps most troubling was that expectation for the elimination of bribery and corruption actually declined as students matriculated through the curriculum. At least for the time being, it appears that Lebanese business students do not anticipate encountering American-style management practices, which have formed the core of the Business courses, when they enter the workforce.*

**Keywords:** *Accountability, Equity, Tolerance, Consultation, Transparency, Hegemony*

JEL classification: M16

**Background:** The issue of globalization often centers on the concept of “hegemony” and can be traced to the writings of Antonio Gramsci (1971, 1975) regarding the ability of dominant powers to infuse their values into the cultures of developing countries. From a management point of view, the “chief instigator” in all of this seems to be “American style” business education and its proponents quickly argue that appropriate business practices can only enhance the economies of foreign countries if these societies would only accept the logic of the American mode of conduct (Mir, 2003; Grey, 2002, 2004). Of course, the influence of American-style business education is not restricted to the third world. As Julian Birkinshaw (2011), a Professor at the London Business School, noted in *Fortune Magazine*:

“Consider a few basic facts. At London Business School, one of the top B-schools outside North America, more than 90% of the faculty received their PhDs in North America. The same is essentially true at Insead (France), IESE (Barcelona), the Indian School of Business (Hyderabad), and CEIBS (Shanghai). The top management journals, from *Fortune* to *Harvard Business Review* to *Administrative Science Quarterly*, are all based in North America. The top management consultancies, from

McKinsey to BCG, Bain and Booz Allen, all have deep American roots. Management ideology is, in essence, the last bastion of American hegemony.”

**Business education goals and objectives:** In business education, this “benign approach” to hegemony is couched as “leadership” with the end-goal being to improve the way business is currently conducted in foreign societies. Yet there are those who argue that there is a hidden economic motive. According to Turnbull (2010) “the current model of business education preserves the status quo of twenty-first century capitalism and leaders appear to be powerless to act against a dominant ideology that reveres shareholder value above all else.”

Within the business school environment, American values are considered to be sacrosanct since they are backed up by statutory law and this is reflected by the faculty members’ tendencies to select instructional materials that are founded on the American management ideal. In fact, work place realities are given “short shrift” since the possibility of reverting to “pre-modern” approaches to leadership would be unthinkable (Kjonstad & Wilmott, 1995).

**Management from an Arab perspective:** Managerial approaches in the Gulf States arose from a unique set of cultural factors stemming from tribal influences and desert survival. Often portrayed as being at odds with “progressive” Western values, at least one study revealed that Muslim workers are more contented and productive in a company run by Muslims and based on Islamic ideals (Hashim, 2010). Branine and Pollard (2010, 718-21) have gone so far as to suggest a “utopian” vision of Arab leadership based on Islamic values based upon their contention that Islam provides the structure for its own unique management approach founded on the following Islamic principles: *Intention, Mindful of God, Kindness and care, Justice, Truthfulness, Conscious of self-improvement, Sincerity and Keeping promises, Consultation, and Patience.*

What is interesting is that if one did not know that these values were taken from the Quran, they could just as easily be viewed as prime examples of American ethical values. Branine and Pollard (2010) go on to argue that not only would multi-national corporations benefit from following these tenets, Arab countries would improve their ability to attract foreign investment.

**The Situation in Lebanon:** Often viewed as a microcosm of Arab and Western value systems, with roughly a 2:1 Muslim/Christian population, Lebanon serves as an ideal location to compare Middle Eastern and American approaches to management. With a culture that is deeply-rooted in “paternalistic” traditions, the Lebanese tend to view gender equality somewhat differently (ILO, 2004; Khalaf, 1993a, 1993b). Also placing it in opposition to Western values is Lebanon’s history of corruption. According to its 2012 report, Transparency International rated Lebanon at 30/100 placing the country 128<sup>th</sup> out of 176 nations and near the bottom of the Arab World. Obviously, such levels of corruption tend to undermine attempts to achieve “accountability” and “transparency”.

What many opponents of “Arab values” fail to realize is that Arab business leaders do not necessarily conform to Western stereotypes (Muna, 1980; Weir, 2001). Admittedly Lebanon has a high Power-Distance level (80) but this places them between Romania (90) and Bulgaria (70). Therefore to view the Arab style of

management as purely top-down is patently incorrect (Hofstede & Hofstede, 2005; Gerster & Day, 1994; Ronen, 1986). In fact, the Arab system is far more complex for its roots stem from “Arab tribal power” which evolved into the leadership/authority paradigm that Ali (1995) labeled “sheikocracy”. The sheik’s power was based on their family and tribal affiliations and by default, persons who were close to the leader shared in his power. This gave rise to the tradition of political patronage (known in the Arab world as *wasta*) in which members of the extended family of the sheik, along with close friends and associates were recognized as holding both power and authority (Hutchings & Weir, 2006; Abdalla, Maghrabi, & Raggad, 1995; Weir, 2001). The existence of “wasta” appointments often results in individuals being elevated to positions far above their level of competency making the Arab World a poster child for *The Peter Principle*. The primary difference between Laurence Peter’s theory (Peter and Hull 1972) and the “wasta-based” hierarchy is that the appointees start at this point to begin with! Because the underlings have no decision-making power, the success of such a structure is epitomized by technocratic divisions of labor and a strict adherence to established rules and regulations which on the surface is highly reminiscent of Weber’s vision of rational-legal authority (1947). This has given rise to an extremely bureaucratized structure with relatively high levels of uncertainty avoidance although Lebanon (68) is markedly lower than Romania (90) and Bulgaria (85)...

### **Hypothesis Development:**

**Progressive Values Embedded in American Business Education:** The authors elected to focus on five key value systems that form the foundation of modern business practices in the US. Broadly classified as accountability, consultation, equity, tolerance, and transparency, these values form the core of the AACSB-approved curriculum which treats them as sacrosanct and as such, not generally open to debate (Panitch & Ginden, 2004; Goodstein, 1981). Although business students are progressively immersed in these teachings and gradually become more accepting of them as individuals, they are also able to observe the “realities” of the society in which they live and the fact that “work place norms” often dictate that these values are often ignored.

**Accountability:** Giddens (1984, p.30) defined accountability as being “accountable for one’s activities is to explicate the reasons for them and to supply the normative grounds whereby they may be justified.” Viewed from this perspective, the expectation is that superiors will abide by existing rules and regulations when dealing with their subordinates in a fair and impartial manner. The authors drew the following null hypothesis in terms of *accountability*: *H<sup>1</sup>: “Overall, there will be no difference between the student groups in terms their belief that appropriate behaviors regarding equal treatment in regard to promotion and rewards will be adopted by Lebanese managers.”*

**Equity:** Stobart (2005, p.275) defined equity in the following way: “Equity is defined as a qualitative concern for what is just. This involves, but is not the same as, equality of opportunity and of outcome.” Certainly there is no more overriding concept that permeates the American business curriculum than equity in treatment of women and other minority groups. As a result, the authors drew an additional null hypothesis relating to gender equity: *H<sup>2</sup>: “Overall, there will be no difference between the student groups in terms their belief that appropriate behaviors regarding gender equity will be adopted by Lebanese managers.”*

What is far less clear from the literature is the extent to which the Lebanese society will be as accepting of the same equity issues when they relate to members of other races. Given that much of their exposure to other races is with “domestic workers” the authors drew an additional null hypothesis regarding racial equality:  $H^3$ : “Overall, there will be no difference between the student groups in terms their belief that appropriate behaviors regarding racial equity will be adopted by Lebanese managers.”

**Tolerance:** Rather than include religion under the umbrella of equity, the authors chose to view it as a tolerance issue. Crick (1971, p. 44) characterized tolerance as “the degree to which we accept things of which we disapprove” and it has become another commonly advanced ideal that is manifested in American management practices. Despite the negative publicity generated by fundamentalist groups within the Muslim faith, religious tolerance is considered to be an essential Islamic virtue (Kurtz, 2005; Asali, 1994). But one must remember that Lebanon is also a microcosm in which five religious groups have competing political ideologies. Although this inter-religious conflict reached a peak during Lebanon’s lengthy civil war, its effects are still felt in Lebanese politics today (Ghosn and Khoury, 2011). Since there is no clear line of demarcation between religion and politics in Lebanon, the authors drew the following null hypothesis regarding tolerance:  $H^4$ : “Overall, there will be no difference between the student groups in terms their belief that appropriate behaviors regarding religious tolerance will be adopted by Lebanese managers.”

**Consultation:** Yukl and Fu (1999, p. 220) expressed the following view of consultation. “Consultation is also a form of empowerment because it provides subordinates with influence over important decisions. Consultation provides an opportunity for subordinates to voice concerns about adverse consequences of a proposed change.” In the United States, it is accepted that leaders have an obligation to consult with their subordinates on important issues and to keep them informed of pending decisions that may affect their personal well-being. Traditionally, the Arab leadership style included an expectation that the Sheik would consult with the tribe when it came to their overall welfare (Neal, Finlay, & Tansey, 2005; Welsh and Raven, 2004). Therefore consultation, at least as American business programs define it, is not entirely inconsistent with Lebanese management practices which led the authors to draw the following null hypothesis:  $H^5$ : “Overall, there will be no difference between the student groups in terms their belief that appropriate behaviors regarding consultive approaches to management will be adopted by Lebanese managers.”

**Transparency:** Transparency International defines transparency “as the abuse of entrusted power for private gain. It hurts everyone who depends on the integrity of people in a position of authority.” The most apparent abuse of transparency in Lebanon can be seen in terms of the endemic levels of corruption which are rooted in the system of *baksheesh* payments that were fostered during four centuries of Ottoman rule (Cavico and Majaba, 2010). As a result, the authors drew their first null hypothesis regarding transparency:  $H^6$ : “Overall, there will be no difference between the student groups in terms of their belief that appropriate behaviors regarding keeping employees informed about decisions that can affect them will be adopted by Lebanese managers.”

The Arab tradition that while the leader was expected to consult with his tribe, his power meant that his were not open to scrutiny or challenge. This led the authors to

draw an additional null hypothesis regarding *transparency*:  $H^7$ : “Overall, there will be no difference between the student groups in terms their belief that appropriate behaviors regarding open and honest dealings with employees will be adopted by Lebanese managers.”

There is no question that Lebanon is viewed as one of the most corrupt countries in the Middle East and these practices have become viewed as just another cost of doing business. The existing levels of corruption in Lebanese society certainly place the country’s business practices at odds with American values. This led the authors to draw their final null hypothesis regarding the implementation of anti-corruption policies by Lebanese managers:  $H^8$ : “Overall, there will be no difference between the student groups in terms their belief that appropriate behaviors regarding bribery and corruption will be adopted by Lebanese managers.”

## **Research Methodology**

**Development of the Instrument:** The current study is an extension of the work done by Neal and Finlay (2008) regarding American hegemony in business education. Their initial study relied on statements regarding management ILT as indicators of the degree to which “modern” business practices were being accepted by students. The current investigation expanded on his methodology by refining the instrument to directly address eight keys approaches to managerial behavior. A summary of the eight questions relating to the criterion variables can be found in Appendix 1.

**Data Collection:** The second improvement was to create a means of tracking the growth of hegemonial acceptance among business students. While Neal and Finlay (2008) gathered information from senior-level students, the current inquiry broadened the sample to include students who were taking introductory and graduate courses. As the students progress though their major or into graduate study, these hegemonic values are continually emphasized. As a result of this “benign indoctrination”, American students are sensitized to these issues and adopt them as the only acceptable way for managers to behave. The question here is not whether Lebanese students have the same level of acceptance, but rather if they believe that they will encounter the same managerial behaviors when they enter the workplace.

**Statistical Analysis:** The authors first conducted a standard ANOVA with the data to isolate significant variations in the group responses then followed up this analysis by applying the Scheffe’ option to the significant variables since it guards against the occurrence of Type 1 error and the resulting likelihood that spurious significant relationships could be declared (Hair, Anderson & Tatham, 1995).

## **Analysis of the Data**

**Hypotheses arising from the criterion variables:** This project was designed to determine the extent to which the five hegemonic values are perceived as being extant in the Lebanese workplace. The statistical summary of the ANOVA analysis of the eight questions comprising these five categories is provided in Table 1 and reveal that only in terms of racial equality, keeping employees informed and bribery and corruption were there any differences between the expectations of the student groups.

**Table 1**  
**ANOVA Results**  
**A Comparison of Levels of Agreement with Appropriate Behaviors**  
**By Stage of Business Education**  
**N= 463, df = 461**

	F Value	Sig.
Hegemonic Managerial Behaviors		
Appropriate behaviors regarding promotion and reward structures	.830	n.s.
Appropriate behaviors regarding gender equality	2.128	n.s.
Appropriate behaviors regarding racial equality	11.580	.000
Appropriate behaviors regarding religious tolerance	.066	n.s.
Appropriate behaviors regarding consultative approaches to management	1.992	n.s.
Appropriate behaviors regarding keeping employees informed about decisions that can affect them	4.158	.016
Appropriate behaviors regarding open and honest dealings with employees	1.682	n.s.
Appropriate behaviors regarding bribery and corruption	3.800	.023

Since three significant differences were noted, the authors employed the Scheffe ranked means option to the mean responses from the three student groups (A = introductory; B = capstone; C= graduate) where significant differences were noted. Unfortunate, the results that are summarized in Table 2 do not show a clear trend among the groups in terms of their expectations.

**Table 2**  
**Scheffe Ranked Means Results**  
**A Comparison of Levels of Agreement with Appropriate Behaviors**  
**By Level of Student's Education**

Change Scores: Hegemonic Managerial Behavior	Means	Scheffe α = .05
Appropriate behaviors regarding racial equality	A = 4.92 B = 5.38 C = 6.14	A < C
Appropriate behaviors regarding keeping employees informed about decisions that can affect them	A = 5.14 C = 5.74 B = 5.81	A < B
Appropriate behaviors regarding bribery and corruption	C = 4.99 B = 5.57 A = 5.86	C < A

**Accountability:** The low mean ratings, which actually show a uniform level of disagreement that the concept of accountability will be implemented by Lebanese managers. When combined with a lack of statistical significance (A = 4.73; B = 4.92; C = 4.58) the authors were led to accept the null hypothesis (H<sup>1</sup>) and conclude that

students do not expect to enter a workplace in which equal reward structures are present.

**Equity:** While the means show that the students are progressively hopeful that gender equity will improve in what is essentially an Patriarchal society (A = 5.32; B = 5.60; C = 5.87) their low levels of expectation and lack of significant variation led the authors to accept the null hypothesis on gender equity ( $H^2$ ) and conclude that students do not expect to enter a gender-neutral workplace.

Quite unexpectedly, the expectation that racial equality would be present in the workplace actually rose at each subsequent course level with the students enrolled in introductory courses being significantly less likely to believe in racial equality implementation than graduate students (means: A, 4.92; B, 5.38; C, 6.14). The reason for this finding is unclear but there is a possibility that students who have actual work experience may be interacting with equally-qualified employees from other races. Given these findings, the authors rejected null hypothesis ( $H^3$ ) and concluded that graduate students are more likely to expect racial sensitivity in the workplace than students enrolled in core courses.

**Tolerance:** The mean ratings show uniformly low levels of expectation in regard to this issue (A = 5.27; B = 5.36; C = 5.26) thus supporting the authors' expectations and leading them to accept null hypothesis  $H^4$  and conclude that students do not expect to enter a work environment where religious tolerance is practiced.

**Consultation:** The mean values for consultive behavior suggest that levels of expectation (C = 5.69; B = 6.06; A = 6.16) actually declined as students reached the point when they would be applying for work and were statistically similar. This led the authors to accept hypothesis:  $H^5$  and conclude the students do not expect their future employers to follow the text-book approach to consultation.

**Transparency:** The authors were somewhat surprised when the data in Table 2 showed an increasing tendency for students (A = 5.14; C = 5.74; B = 5.81) to expect to receive critical information from employers. The means rose significantly from the core level to senior capstone courses and while dropping off slightly, were marginally significant at the graduate level as well. While the relatively low mean rating of 5.81 still indicates that students are undecided if such information will actually be provided., the levels of statistical significance led the authors to reject hypothesis  $H^6$  and conclude that by the time business students reach employability, they at least hope that Lebanese managers will provide information regarding decisions which may impact their professional lives.

Such was not the case when it came to open and honest dealings with employees. The means were consistently low (C = 5.19; A = 5.21; B = 5.56) and statistically similar leading the authors to accept hypothesis  $H^7$  and conclude that students who will soon be entering the workplace are under no illusion that their bosses will consistently deal with them in an open and forthright manner.

The one factor that concerned the authors most, given its consistently devastating impact on the Lebanese economy, was bribery and corruption. The ranked means show a steady and significant decline in expectations from the introductory to

graduate level at which point the subjects are essentially ambivalent to the problem (A = 5.86; B = 5.57; C = 4.99). This led the authors to reject hypothesis H<sup>8</sup> and conclude that as business students enter the workplace, they come to the realization that the corruption which has plagued their country is far from over.

### **Conclusions and Implications:**

The findings from this study, which focused on students at three important stages of their academic careers, showed somewhat mixed results. In terms of accountability, gender equity, religious tolerance, consultation, and open and honest dealings with employees the mean levels of expectation were insignificant. Furthermore, since the mean ratings generally ranging between 5 and 6 on the ten-point scale, this indicates that the subjects were generally undecided as to whether these practices would be implemented. This finding alone suggests that the attitudes that students expect their employers to have are essentially inconsistent with the “appropriate behaviors” that they have been taught.

Even in the case of racial equality, where the mean ratings were significant and consistently rose from the introductory level, the mean for graduate students was only 6.16 which on a Likert scale would constitute barely agree. The same was true for “keeping employees informed” which, although significantly different, ranged from 5.14 to 5.81 indicating at best an attitude of hopeful uncertainty. The one factor which educators in Lebanon are most hopeful is that business education will eventually bring an end to the endemic levels of corruption and the strangling effect it has on the Lebanese economy. While the authors found a significant difference in the expectancy levels, the reason behind his variance was disheartening. The levels of expectation fell from a high of 5.86 with students taking core courses to 4.99 at the graduate level. The implications of this are clear. While students may initially be somewhat hopeful that things will get better, by the time they enter the workforce it is painfully obvious that corruption continues to flourish.

Student work-place expectations are an important aspect of human resource management. They govern the way that new workers view both their managers and peers and the behaviors which they feel will be most likely to “get them ahead”. This study suggests that although Lebanese business students may gradually come to accept the American-style management approaches taught in their classes, they are under no illusion that anything will change for the better in the Lebanese workplace. So what does all this mean? To begin with educators have by no means been operating under the illusion that change in the Middle East will occur immediately. As is the case with all cultural advancements, the impact is at best, generational. But what this does tell us is that although we may make a change in the thought processes of our students regarding appropriate managerial behavior, the question remains as to whether the reality of the workplace will “trump” idealism and continue to mire Lebanon in the status quo. Given these findings, even the most optimistic among us is left to wonder.

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# THE ROLE OF INDUSTRIAL PARKS IN ECONOMIC DEVELOPMENT

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**Abstract:** *In an attempt to accelerate the process of reforming the economy, the central institutions focus on supporting the use of technology to modernize the industry that would lead to the diversification of activities and the achievement of sustainable industrial development. The imperfections of the market and of the institutional system hampers companies' access to information, knowledge, new technology and financing resulting in increased business risk and directly affecting the progress towards achieving development goals.*

*Industrial parks may be considered as a solution to overcome these flaws in the attempt to accelerate the economic development by attracting innovative businesses that can generate jobs, higher incomes and therefore more resources to institutions. They can exploit the local potential in supporting knowledge-based business development and outline an environment where companies can interact with other supporting knowledge suppliers thus facilitating business and local development.*

*The approach of the subject is theoretical starting from the need to support the economic activities by local social institutions fostering the access to information and technology and identifying some solutions that meet these needs - industrial parks. Even if industrial parks in Romania are still considered in draft form, some examples can be identified as functional and supporting the local development. Their functionality is given by the involvement of local authorities and the interest of the business environment in exploiting the economic potential of the region. The role of industrial parks in supporting the local development is measured in the number of new jobs created, the income received by local institutions by paying taxes and duties from firms benefiting from the infrastructure made available through their involvement in attracting investors; the more productive the industry and more efficient the production, the higher the company's results and therefore the benefits of local institutions.*

**Keywords:** industrial parks, economic development, productivity, efficiency

**JEL classification:** F21, F22

## 1. Introduction

In the context of an overall development strategy, industrial parks can be a solution for increasing the local competitiveness through what it provides - institutional framework, modern services in administration, financial consultancy, training, technical guidance, information services, shared facilities, research and own infrastructure designed to meet the needs of companies they gather by providing them with modern services for the business deployment and development. A concentration of a variety of activities and services to support the industry can influence investors' decision to switch to such a region. Successful industrial parks can therefore become centres of growth and innovation, supporting local

development and contributing to the development of the national economy.

## **2. Industrial parks - production efficiency - local productivity**

Industrial parks are an important development tool adopted by many industrialized countries (Håkansson and Johanson, 1993). The growth sustained by the technology used in the industrial park opens opportunities for creating new jobs, improving local productivity and maintaining a competitive environment in the respective country (Markusen et al, 1986). In addition, producers operating in the industrial park will get greater benefits at lower costs. The chance to obtain additional benefits by supporting local development and the opportunity to create new jobs along with the income growth will positively influence the local economic development (Castells and Hall, 1994). These changes, together with the concentration of investment in research and development will modify the industrial structure of the local region and will contribute to upgrading the quality of life.

*Productivity* is a competitiveness indicator and reflects the effectiveness of activities. The factors affecting productivity were identified (industrial structure, capital savings, technology of adaptability, quality of the workforce) and analyzed by many experts concerned with the achievement of relevant studies which have verified the practical extent to which these factors are specific to the local environment (Kim, 1997).

According to the theory, productivity is the relationship between inputs and outputs in the production process. The efficient transformation of inputs into outputs, thus stimulating productivity is important for a region to become competitive from an economic standpoint. This input-output transformation requires the use of classical production factors: land, labour, capital, as well as the use of neo-factors such as information and entrepreneurship; to improve the input-output ratio or productivity, the emphasis must be placed both on the quality and on the quantity of capital investment, labour, and the locations chosen for production (Kresl, 1995).

The development of industrial parks is an important factor for any economy to actively participate in the global economic system. Industrial parks are based on knowledge and rely on the intensive use of technology. They are representative for the regional economic development and led to a decisive effect of stabilizing the economic reforms in economy. The innovation capacity is the main source of competitiveness of a producer. Innovation stimulates economic growth and development and plays an important part in acquiring the producer's performance and also in attaining long-term competitiveness (Howells, 2002). Innovation is the main way for producers to maintain a competitive advantage and enter new markets. Therefore, the production efficiency is closely related to the innovation of the manufacturing process. The benefits of the local environmental regarding productivity are derived from the innovation capacity since the industrial park gathers different economic activities and is the place where technological innovation may occur. The higher the capital-labour ratio, the more used the advanced production technology and the higher the level of labour skills able to apply new technologies in the production processes and getting new goods. Consequently, the local productivity will increase along with the productivity of labour and capital factors (Kendrick, 1977).

When managed successfully, industrial parks can provide a favourable environment for the development of concentrated firms but also for the local development. When not properly managed, industrial parks will not be able to overcome some issues faced by concentrated companies and that will affect the local environment, such as

pollution. Many industrial parks operate in an unsustainable way due to the social and environmental problems caused by poor management. Operating industrial parks reflect a desire to meet these challenges.

The policy of public institutions must be geared towards the support of industrial parks offering the possibility of a sustainable future. The framework conditions for industrial parks differ among countries and within countries due to the local governing competences, the social, economic, cultural and environmental aspects of each region and of the local community.

### **3. Industrial parks in Romania**

Last year the Romanian industrial sector increased its turnover by 3.1% compared to 2011 and represented a quarter of the total weight of Romanian GDP, which demonstrates the growing interest for this solution of supporting the business environment. One more reason why expectations are directed towards developers who should approach industrial park projects delayed for several years due to economic and political stability.

The interest in industrial parks is also proved by the transactions of industrial areas: the areas traded in Bucharest count up to a total of 38,000 square meters, while in other regions of Romania the total industrial area traded in 2012 comes up to 32,000 square meters, out of which 24,000 square meters were direct transactions between owners and renters. Nationally, the total rental activity consisted of 22 transactions with an aggregate area of approximately 89,000 square meters, the average being 4,000 square meters.

The largest transaction in 2012 was the rental of an area of 15,000 square meters by a chain store, near Bucharest, followed by a company producing car spare parts that leased 14,000 square meters in the same region. Other large scale transactions were that of a company producing electronic components that took over 7,500 square meters in the western region and a commercial company that has leased 6,000 square meters near Bucharest.

Logistics and industrial projects outside Bucharest, due to end in 2013 and 2014, cover 144,000 square meters, plus 70,000 square meters to be found in the drafts because of the difficulty to obtain financing. In 2012, the stock of industrial areas in Bucharest and around increased by 2% to reach a total of 980,000 square meters and the total rental activity increased by 40% compared with the beginning of 2012, according to a report on the industrial market in Romania. The demand for industrial areas at the end of 2012 increased by 24% compared to the demand manifested at the beginning of 2012, and most transactions were concluded in the capital city, representing nearly 35% of total demand. The total area of industrial parks in Romania in 2012 was 2337 ha.

The development of industrial parks is an important issue for economy because of the large investments attracted in these areas. The pulse of the existing businesses is perceived by means of the profits or losses declared by the companies managing these perimeters. Thus, according to a classification drawn by the earnings reported by firms that manage parks in Romania, the most flourishing businesses are in Bucharest. A company that manages an industrial park in the capital city earned last year a net profit of 6,096,315 lei for a turnover of 23,261,083 lei. The second place in point of earnings among firms that manage the 48 industrial parks in Romania is held by an investor who had the courage to develop the largest private industrial park in the south-eastern Europe who can boast with a net profit of 4,250 .971 lei.

In 2012 almost 50% of the investments in the industrial sector were attracted to Bucharest while Romania's southern and western regions attracted 25% and 20% respectively out of the investments made; surprising or not, the port area attracted only 1% of the investment. By enlarging the industrial park around Bucharest 20,000 more square meters of industrial areas were expanded. Logistics operators were the most active in the local market, investing both in domestic infrastructure optimization, and in expanding storage capacity. In order to fulfil the future development plans, they turned to other regions with growth potential. Nationally, no significant changes were recorded in the rent value; depending on the area surface rented it fluctuated between a minimum of 3.75 EUR / square meters / month and a maximum of 4 euro / square meters / month.

Agriculture, tourism and energy were considered, one by one or altogether as possible saving solutions for the Romanian economy. These options can be considered long-term solutions (5-7 years). Assuming that the main concern of most people is providing for living, Romania needs a functional economic engine today. There may be solutions; it is difficult to translate them into reality, so that the results, even the short-term ones are delayed. "Industrial parks" are considered to be the most viable solution for obtaining immediate results.

A good example and a successful model is the industrial parks in Hungary (205 functional industrial parks, most of them reaching or being very close to maximum efficiency) due to the national strategy for supporting the activity of industrial parks and to the thoughtful policies that provide consistent facilities and which are supported by a well-designed infrastructure, lobbying, even at the government level. In Romania, the competence to grant the quality of industrial park belongs to the Ministry of Regional Development and Public Administration or government. Following the pattern of countries with economic experience - shared at the meetings held in the various cooperation projects, involving companies from different countries, the development regions of Romania have developed a sustainable development plan with special attention to industrial parks.

By including industrial parks in their development plans, public institutions try to become strongly aware of the need to focus on those actions that create competitive advantages at regional, national and European level, including here the construction of industrial parks.

Considering the fact that the industrial park is a limited area in which economic, research, manufacturing and services activities are being developed so as to grow and enhance the natural and human resources of the area, involving local authorities to improve the state of networking among institutions and the business community in supporting local economic and social development by setting up a managing company refers to:

- providing / performing the utilities and services necessary for the activities carried out in the industrial park;
- ensuring and guaranteeing non-discriminatorily the right to use on infrastructure and utilities, according to the contracts concluded with beneficiaries;
- repairing, maintaining, modernizing and developing, accordingly the infrastructure and utilities within the industrial park;
- ensuring the access to the industrial park area meant for common use;
- administering industrial park spaces and buildings;

- managing their own as well as the attracted financial sources, in accordance with the strategy for operation and development of the industrial park;
- enabling the selection of applications for admission of new businesses in the industrial park;
- attracting investors for the development of productive activities and services;
- develop operating strategy and industrial park development;
- providing support for domestic and international partnership development, business consulting, technology consulting;
- ensuring the collaboration with governments, public local and central administration authorities.

The interest shown by authorities by ensuring these conditions as well as the investors' interest in valuing the local potential will lead to achieving some results in favour of the local development:

- increasing the number of jobs;
- increasing the amount of foreign direct investment;
- creating and developing high technology industries;
- developing activities that ensure the hiring of highly qualified staff;
- increasing the capacity to meet the needs of the domestic market, to expand exports and reduce imports of industrial products;
- producing competitive goods and services for domestic and overseas markets;
- conducting activities in accordance with the regional development objectives.

The important role industrial parks play in supporting the economic development and modernization is acknowledged by the European Economic and Social Committee as well, which recommends a more focused and integrated approach geared towards their support and development, in particular within the crisis and post-crisis context, requiring a more comprehensive strategy to take advantage of the benefits these parks can bring for growth and competitiveness.

With the support of central institutions, the improvement of industrial parks was provided with commitment referring to minimum investment amount from companies that are worth millions of euro, regarding the good-performance guarantees, and the minimum number of new jobs created and minimum gross wages to be paid to employees.

This could be considered an important step in achieving progress compared to the situation of the early 2000s when the local authorities received from the Ministry of Public Works, Transport and Housing the approval for the construction of a number of industrial parks; the perspectives were clear and the visions bold: building industrial parks on thousands of acres, vertically and horizontally that could channel towards urban areas the plus-product benefits for companies and the pathways could emanate enormous quantities of finished products towards the country's customs gates.

Industrial parks were meant to be the source of material benefactions for the workforce whom, looking for jobs used to migrate to these urban areas, be they central or peripheral. After two years, lost from the sight of the public institutions, the industrial parks turned into ruins.

The new projects of industrial parks have attracted major electronics and automotive companies, thus outlining a certain manufacturers and services supplier profile,

since the investors in question were important companies from South Korea, Spain, but also Romanian entrepreneurs eager to be closer to beneficiary companies in the West. In periods of economic difficulties, tax incentives and benefits granted by locating their businesses here represent the most important issues for investors. The first issues to consider are undoubtedly the geographical landmarks, but infrastructure and professional training of the workforce count as well.

The main advantages of the Romanian industrial parks are of two types: tax and material benefits. The tax benefits derive from the Romanian legislation that states tax exemptions for a period of three years for all investors settled in the industrial parks, and a substantial reduction of the tax on buildings. In addition, it is the municipality that builds up, with its own resources, the entire infrastructure (roads, electricity, water, sewage, heating, and telecommunications). The managing company supports the companies settled in the park, linking investors and local public institutions. The investors can also benefit from the free information on aid schemes and funding resources from European funds. The industrial parks are of Greenfield type, thus the promoted tender does not only rely on a low cost for the land but also on a complete network of utilities: water supply and sewerage network, roads, public street lighting, telecommunication networks.

The activities of the companies concentrated in industrial parks in Romania are mainly in the fields of:

- manufacturing, with the possibility to concentrate on various leading industries;
- business prevailing in the financial, banking, consulting, design, research and development activities, as well as business management activities;
- distribution focused on goods storage and logistics activities;
- services, where the industries producing services prevail;
- in addition to the activities that prevail and confer the specialization of the industrial park, there is a number of related services that can be carried out in order to support the development of these activities of expertise: provision of utilities, cleaning and security, trade and catering services, hotel activities, accounting services, business support services, insurance and other similar activities or direct linked to them.

In times of economic crisis, the support for these investors has come neither from the state nor from local market outlets, but from across the border; jobs have been maintained throughout the previous year thanks to the fact that the production of the park was geared more towards exports. In order to support investment in the industrial park and to shorten the periods for obtaining approval or authorization documents, the managing company collaborates with the representatives of local authorities, thus speeding up the process of administrative assessment to obtain the specific documentation. The Strategy of the Industrial Park stipulates the existence of the services important for economic such as banking / insurance, courier, etc. activities within the perimeter of the park.

In 2006, in Romania there were 37 industrial parks where there were 426 companies functioning with over 10,000 employees. Of these, 23 were operational, the others being in various stages of development. In 2010, there were 50 industrial parks throughout the entire country, created on a 2001 government ordinance that establishes the facilities that the state provides for investors who come to these places. The most important facilities are downsizing local taxes or establishing an

annual rent under the market value. Industrial parks and cheap labour force in Romania attracted big businesses of the global market that operate activities in various fields, from manufacturing to services and trade as well as foreign direct investment of billions of euro.

**Table 1.** Indicators associated industrial parks (2012)

<b>Indicators</b>	<b>Value</b>
<b>number of industrial parks (total)</b>	52
<b>number of operational industrial parks</b>	39
total area of industrial parks – ha	2337
<b>firms settled in industrial parks</b>	783
<b>employees in industrial parks</b>	34541

Source: <http://www.financiarul.ro/2013/03/30>

**The ten largest industrial parks created by the state in the last eight years, that attracted billion euro foreign investments and created over 22,000 jobs in the economy, still have 30% of their surfaces unoccupied. Although new investment projects were frozen the engines of production keep on working, "saved by exports".**

Examples of "good practices" are few, but not entirely concentrated in the capital city area; the western and also the southern or central regions are considered attractive to investors due to the opportunities offered, cheaper labour force in some areas, more qualified in others, nevertheless anxious to ensure a decent living especially after the "working abroad" experience.

The other parks - regardless of the region in which they were created (even some in Bucharest) lack a clear vision and an effective national and international marketing service, which, for the circumstances given when investors - Romanian and foreign - are particularly careful with money management and choosing locations, affects the business environment and the market.

**Table 2.** The situation of industrial parks in Romania (July 2012)

<b>Type of ownership</b>	<b>total</b>	<b>operational</b>
Public	27	21
Private	19	12
Public-private	6	6
Total	52	39

Source: <http://www.financiarul.ro/2013/03/30>

#### **4. Conclusions**

Industrial parks represent a factor with certain influence on the economic growth. They create conditions conducive to attract foreign investors. In Romania, the industrial parks in areas where they are functional have a positive influence on revitalizing the business environment, on transferring the modern technologies, and on restructuring and modernizing the industry. The construction of industrial parks in Romania has generated new jobs. Most of the new jobs have been created around the capital city and in the country's western counties. In regions where newly created industrial parks do not exist, there is a poor economic situation and the unemployment rate is high, here we are talking about regions in eastern and south-

eastern Romania. Creating and developing industrial parks in Romania is a process in an incipient phase, but, certainly, this is a solution in attracting investment and supporting local development long-term.

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## E.U. ADVANCEMENT WITHIN THE WORLD TRADE: AN OVERVIEW OF THE LAST YEARS

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**Abstract:** *The expansion of global trade gained considerable force in the last decade, force that generated many transformations and changes. These transformations represent stronger improvements than expected, when compared with the preceding years, even if the trade growth remained below the average rate recorded in the '90s. Some of the improvements are supposed to be consequences of free trade areas expansion. In this sense the present paper aims to observe if the free trade agreements increased the members' international trade and how much a stronger union perform comparing to a weaker one. It analyses the effects of total trade made by the members of the main five free trade agreements: EU, NAFTA, ASEAN, MERCOSUR, and ANDEAN PACT, between 2000 and 2010. In order to analyse the effects of the total trade made by the members of these unions, the authors used data collected from the WTO International Trade Statistics published in 2009 and 2011. For each one of the five unions was built a distinct chart which illustrates the variation of exports and imports during the analysed period of time, as well as the trends of these operations over these years. Comparing all these charts they concluded that EU trade significantly increased as more countries joined the group, in contrast to the other groups which maintained their level along the time. Moreover they have noted a gap between the exports and imports performed by EU and the ones performed by the other unions. EU commercial exchanges were by far superior to the ones of the other areas and, in the same time, the EU trade fluctuations are broader than the ones of the other areas. Perhaps in the next period of time the commercial exchanges of UE and NAFTA will enhance with these areas whose potential has not been fully harnessed. On the other hand, creating a large common market the EU - NAFTA will most certainly constitute a guarantee for global economic stability and sustained economic growth.*

**Keywords:** openness to trade; free trade agreements; expansion of global trade; EU enlargement; EU advancement;

**JEL classification:** F1

## Introduction

The benefits of the free trade have been observed and argued for the first time by Adam Smith in the paper *The Wealth of Nations*, and by David Ricardo in *The Theory of Comparative Advantage*. Ever since, the vast majority of economists have accepted that free trade among nations improves overall economic welfare.

Along time the free trade agreements have proved to be one of the best ways to open up foreign markets to the exporters. The reduction of trade barriers and the creation of a more stable and transparent trading and investment environment make it easier and cheaper for companies to export their products and services to trading partner markets. As a result, the expansion of global trade gained considerable force lately, force that generated many transformations and changes. These transformations and changes represent stronger improvements than expected, when compared with the preceding years, although trade growth remained below the average rate recorded in the '90s.

Therefore the authors bent on remaking to observe if the free trade agreements increased the members' international trade and how much a stronger union performed comparing to a weaker one. In this respect they analyzed the effects of total trade made by the members of the main five free trade agreements: EU, NAFTA, ASEAN, MERCOSUR, ANDEAN PACT, for a period of eleven years between 2000 and 2010.

## 1. Methodology

In order to analyse the effects of total trade made by the members of EU, NAFTA, ASEAN, MERCOSUR, and ANDEAN PACT, have been used data collected from the WTO International Trade Statistics published in 2009 and 2011.

The total exports and total imports of every union were selected for each year separately, to be used for various comparisons.

Table 1: Trade in goods under the trade agreements of selected regions 2000-2010

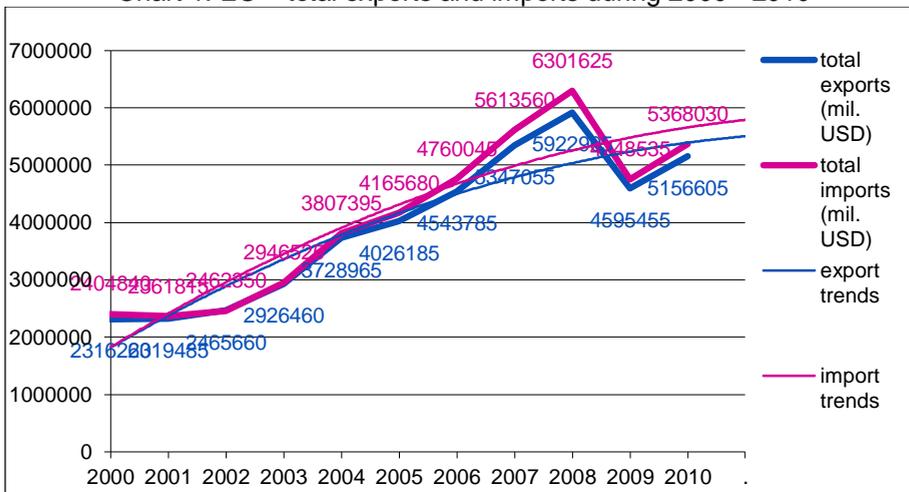
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>EU ( EU-15, EU-25, EU-27 )</b>											
Total exports	2316260	2319485	2465660	2926460	3728965	4026185	4543785	5347055	5922905	4595455	5156605
Total imports	2404840	2361815	2462350	2946525	3807395	4165680	4760045	5613560	6301625	4748535	5368030
<b>NAFTA</b>											
Total exports	1224920	1147505	1106179	1162906	1319617	1475764	1664105	1840714	2035178	1602322	1964481
Total imports	1683550	1579510	1600816	1723110	2007871	2283357	2540553	2700837	2906801	2176718	2681889
<b>ASEAN</b>											
Total exports	432027	387618	407395	474777	568926	655965	769767	865443	989894	814025	1052146
Total imports	380674	347141	366802	411810	513764	603050	688449	775799	939344	727071	953082
<b>MERCOSUR</b>											
Total exports	84591	87816	88824	106098	135811	163990	190131	223763	278366	217239	281307
Total imports	89866	84203	62342	69111	95090	113910	139540	182838	257942	186310	266655
<b>ANDEAN</b>											
Total exports	26225	25266	25966	29991	38931	51449	64824	76652	94500	78518	99165
Total imports	24505	27221	28405	30621	36917	46335	56402	70712	93584	74398	96783

For each one of the five unions was built one distinct chart which illustrates the variation of exports and imports during the analysed period of time, as well as these operations trends over the years.

### 2.1. EU trade during 2000-2010

With the collapse of communism across central and Eastern Europe, EU gained new members. In 1995 three new countries joined EU, in 2004 ten, and in 2007 two more. Thus in the analyzed period of time, respectively the last years, the EU members increased from 15 to 27, their number becoming almost double. In the same time the EU has gone beyond a simple reduction of trade barriers among its members, by evolving towards a deeper economic integration.

Chart 1: EU – total exports and imports during 2000 - 2010

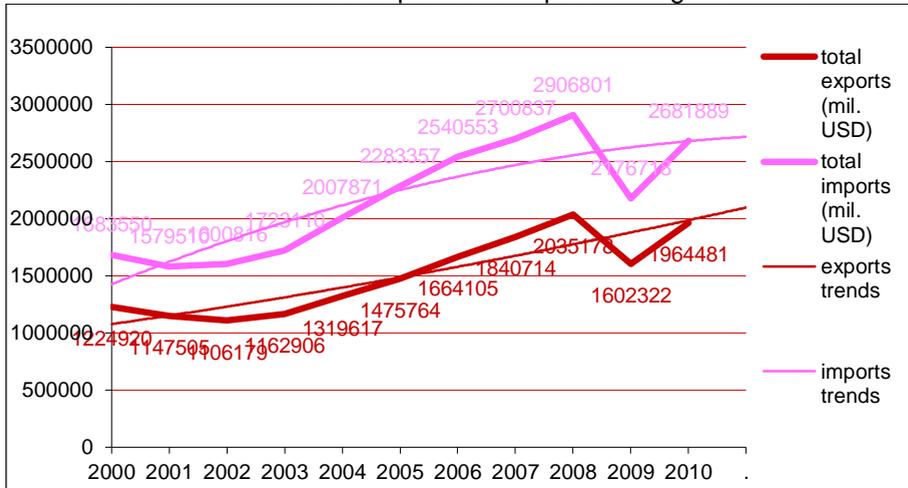


source of the data used for the chart: WTO International Trade Statistics 2009 & 2011

EU export and import evolved constantly during 2000-2010, as can be seen in the trends marked in the chart with thin lines. This happened mainly due to the fact that the number of countries in the EU increased significantly during this period.

## 2.2. NAFTA trade during 2000-2010

Chart 2 : NAFTA – total exports and imports during 2000 - 2010



source of the data used for the chart: WTO International Trade Statistics 2009 & 2011

NAFTA export and import trends during 2000-2010 were in increase, if even exports have registered a slower rate.

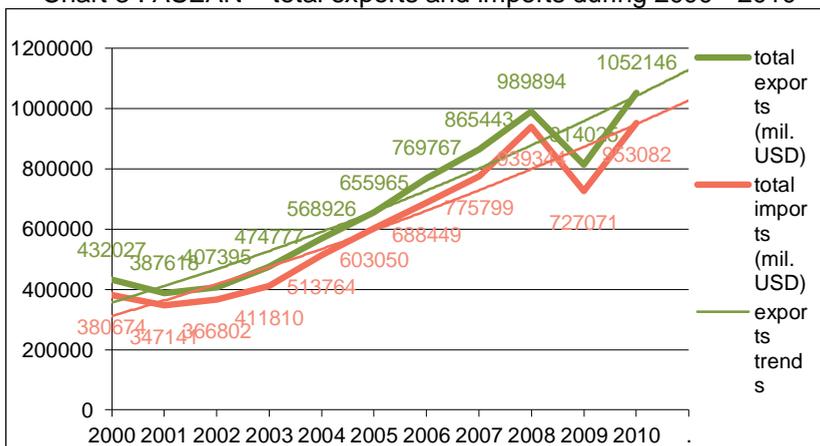
By comparison it can be seen that during this time the trade performed by NAFTA was lower than the EU one.

The fact that NAFTA was never supplemented by deeper forms of regional integration, social policies, or economic cooperation probably limited the benefits and exacerbated the costs.

It seems likely that U.S. imports from Mexico would have grown even faster and increased their share further between 2000 and 2010 in the absence of the huge jump in imports from China.

## 2.3. ASEAN trade during 2000-2010

Chart 3 : ASEAN – total exports and imports during 2000 - 2010

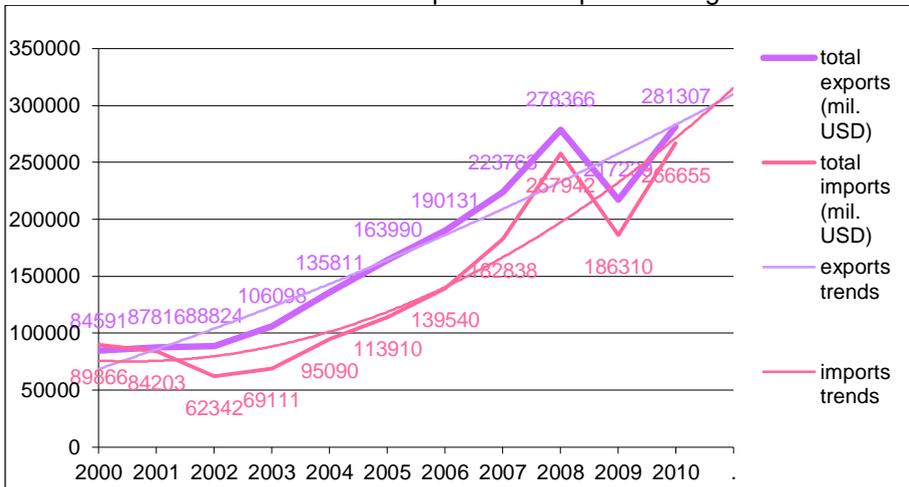


source of the data used for the chart: WTO International Trade Statistics 2009 & 2011

Also ASEAN exports and imports trends have been rising during this period of time. They had an analogue progress, if even the exports had a slightly higher growth rate. The trade evolution and trends are very similar to those of NAFTA.

## 2.4. MERCOSUR trade during 2000-2010

Chart 4 : MERCOSUR – total exports and imports during 2000 - 2010

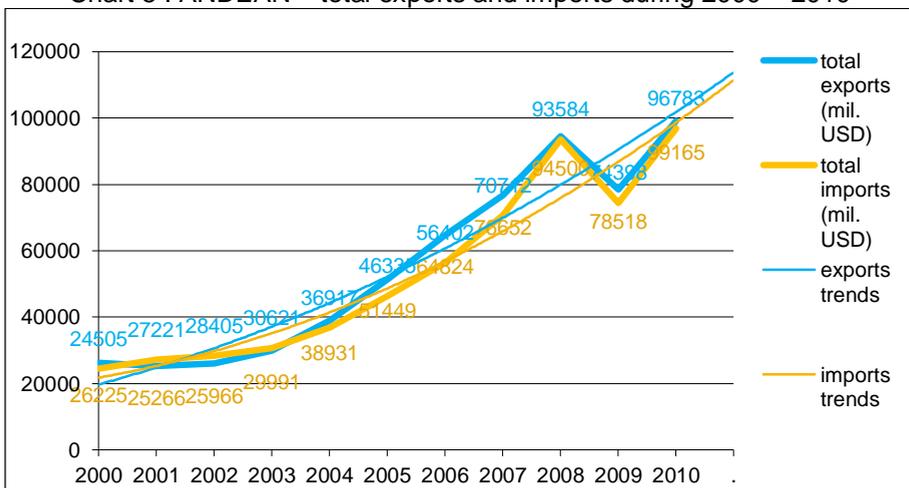


source of the data used for the chart: WTO International Trade Statistics 2009 & 2011

MERCOSUR exports and imports had a smoother growth during the observed time, but their trends have been steadily increasing. Comparing to the previous analysed union MERCOSUR's trade was a third of level.

## 2.5. ANDEAN trade during 2000-2010

Chart 5 : ANDEAN – total exports and imports during 2000 – 2010



source of the data used for the chart: WTO International Trade Statistics 2009 & 2011

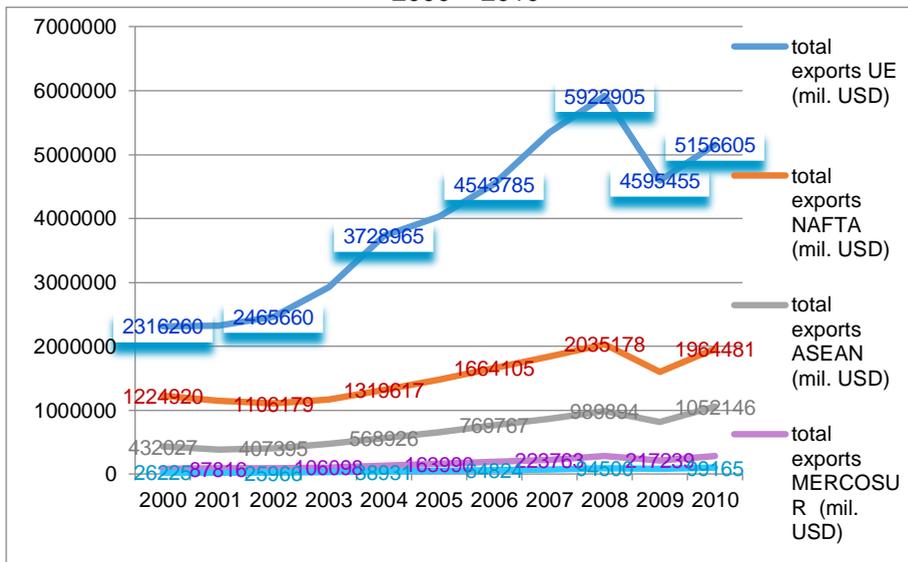
ANDEAN exports and imports trends during this time were in growth, they being at the same level all the time.

Trade liberalisation has been a prominent component of policy advice to developing countries for the last decades. Among the benefits claimed to spring from it, economic growth is probably the most important.

## 2.6. Exports and imports comparison

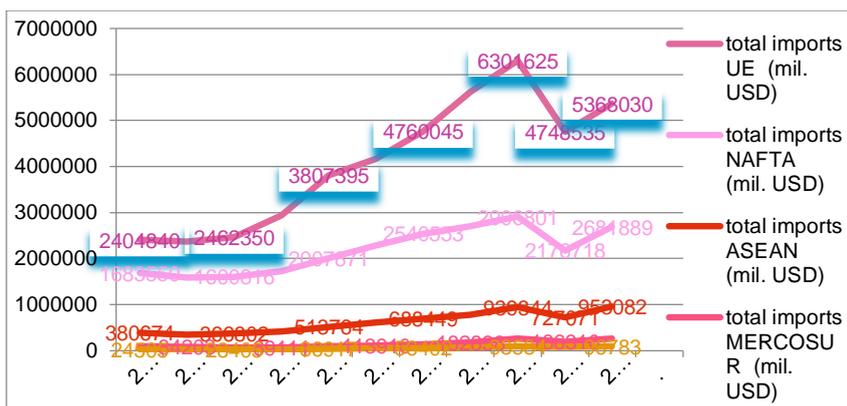
In order to see how much a stronger union performe comparing to a weaker one, we made separate charts for the exports and the imports performed by all five unions.

Chart 6 : Exports picture of UE, NAFTA, ASEAN, MERCOSUR, ANDEAN during 2000 – 2010



source of the data used for the chart: WTO International Trade Statistics 2009 & 2011

Chart 7 : Imports picture of UE, NAFTA, ASEAN, MERCOSUR, ANDEAN during 2000 – 2010



source of the data used for the chart: WTO International Trade Statistics 2009 & 2011

Comparing the Charts 6 and 7 can be observed that EU trade increased significantly once more countries joined the group, in contrast to the other groups which maintained their level.

Without any doubt was a gap between the exports and imports performed by EU and the ones performed by the other unions.

## 2. Results and conclusions

By comparing all the above graphs it can be seen that EU commercial exchanges are by far superior to the ones of the other areas and in the same time the EU trade fluctuations are broader than the ones of the other areas. This is also a consequence of the fact that the Union has expanded considerably in the analysed period.

EU trade increased considerably since more countries joined the group.

It is noted that both exports and imports of ASEAN, MERCOSUR and ANDEAN in 2010 exceeded the maximum level of the previous period from 2008.

Perhaps in the next period of time the commercial exchanges of UE and NAFTA will enhance with these areas whose potential has not been fully harnessed. On the other hand, creating a large common market the EU - NAFTA will most certainly constitute a guarantee for global economic stability and sustained economic growth.

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## CONCEPTS AND METHODOLOGIES REGARDING THE IMPROVEMENT OF ROMANIAN FOREIGN TRADE (I)

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**Abstract.** *The purpose of the current paper is to highlight possible engines that can boost Romanian foreign trade from a chronic deficit to a more balanced one. In the beginning, the main theories and models that tackle this subject will be presented. In this respect, the paper starts with Smith, Ricardo, Manoilescu and Heckscher-Ohlin, in order to see the historic thought of trade model development. Following these models, a more mathematical approach will be made, using a thorough analysis at the product level. All the computations will be based on the combined nomenclature with its XXII classes, being the most exact determinant of traded goods. This paper uses the statistical indicators of Michaely and Lafay, in order to determine the specialization effect of the Romanian classes for a period of twenty one years, starting with 1991 and ending in 2012. This is the point where former, current and future specialized engines of potential trade growth can be established. It is crucial for a country to determine its potential in an open international arena, in order to take the necessary steps to encourage or discourage productive or non-productive areas of certain industry branches. Based on the results and on the previous methodology, a mix of theory with solid mathematical analysis, will give the opportunity to draw up different sets of sustainable development formulas in order to obtain a higher concentration ratio regarding several classes from the combined nomenclature. For Romania to obtain higher gains from international trade, a more sustainable integration in the European Union, it has to stop its chronic balance of trade deficit. Looking at and analysing the potential development of a combined nomenclature class or classes, will help improving Romania's chronic deficit, offering a long term prospective of sustainable development, reducing its foreign debt, improving its balance of trade accounts, and transforming its import driven economy to a more competitive export oriented economy. Achieving these standards will ensure Romania's future development and accession to a more privileged seat in the European Union and in the international arena.*

**Keywords:** *sustainable development, Michaely indicator, Lafay indicator, foreign trade, Romania, combined nomenclature*

**JEL classification:** *F10, F19*

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### **The concept of absolute advantage**

The first who have tried to confute the mercantilist theory based on the concepts that the state policy should be focused on getting rich by all means possible, encouraging

only exports and discouraging imports were the classical economists. The most known ideas were stated by the British economist Adam Smith. The model of the English author is based on two states that produce only two goods, the so called 2X2 model. State specialization in the production of the good where it registers an absolute advantage and application to international trade in order to procure the other good, represents a win-win situation for both states.

The model in the figure below is relevant for the absolute advantage concept of Smith. According to Popescu (2001 and 2009), in Smith's model there is only country A and country B. Both countries produce "a" and "b" goods, the difference being that these goods are produced in different quantities. The labour hours necessary to produce both goods are also different. Based on Popescu (2001 and 2009) the following model will be created.

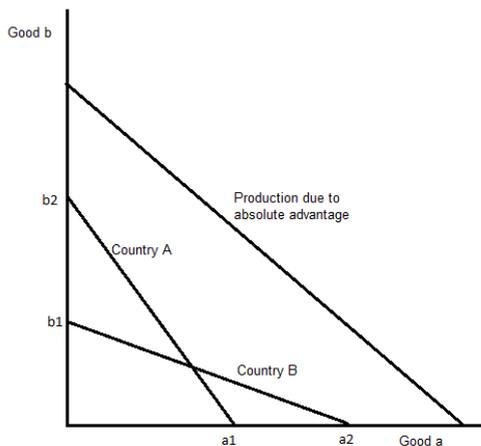
Table 1: The concept of absolute advantage expressed by the 2x2 model

Country / Good	Labour hours needed to produce goods before specialization			Labour hours needed to produce goods after specialization		
	a	b	Total	a	b	Total
A	60	100	160	160	0	160
B	90	70	160	0	160	160
Total	150	170	320	160	160	320
Country / Production	Total production before specialization			Total production after specialization		
A	500	500	1000	500 + 833 = 1333		1333
B	500	500	1000		500+642 = 1142	1142
TOTAL	1000	1000	2000	1333	1142	2475

Source: Own computations based on the 2x2 model of Popescu, G. (2001) *Modele de comerț internațional*, editura Corvin

As shown in the table, country A produces good "a" in 60 labour hours and good "b" in 100 labour hours. In return, country B produces good "a" in 90 labour hours and good "b" in 70 labour hours. Based on Smith's theory, the countries should focused on specialized production of that good where they register the highest internal comparative advantage

Figure 1: The concept of absolute advantage expressed by the 2x2 model



Source: Own computations based on the 2x2 model

The countries in the table should eliminate the production of those goods that consume too many labour hours. In the current case country A will eliminate the production of good "b" allocating the 100 hours for the additional production of good "a". Country B will register the same process eliminating the production of good "a" for the additional production of good "b".

If previously there was a total of 1000 units of each good produced and the total production was equivalent to 2000 units, after production specialization, the production of good "a" increases by 333 units and the production of good "b" with 142, leading to an increase of the overall production from 2000 to 2475 units. In this way, the countries will have to resort to the commercial trade between them, in order to benefit from the argumentation of the total production.

### The concept of comparative advantage

Based on Smith's model, the concept of comparative advantage has been developed and upgraded. The author of the new concept, David Ricardo, states that according to the specialization of the production presented and analysed in the model above, a positive effect for all the parts involved will be attained through international trade. Based on Ricardo, these commercial exchanges represent a positive effect game, a win-win type situation, where all the actors involved attain a certain gain. According to Popescu (2001), you can obtain a relative advantage if "in the exchange of the exported good you obtain a higher quantity of the imported good, better suited than it would have produced the imported good with the same amount of resources".

If we analyse Cerchez (2007), the idea of relative advantage occurs from the different internal opportunity costs. From here result the differences regarding the number of the labour force and the time needed to produce a certain good. The author develops the Ricardian model establishing the premise that there are multiple transactional goods noted from 1 to N, and the salary rate and the currency exchange are taken into consideration.

According to the author, the computation formula for determining the possibility condition of realising out the export process from one country is based on:

$$n_{1j}s_{1c} < n_{2j}s_2$$

Where

$n_{1j}$  = labour consumption / units produced, in country 1, for good  $j$ ;  
 $s_1$  = salary rate in country 1, expressed in international currency;  
 $c$  = currency exchange of country 2 currency, / country 1 currency;  
 $n_{2j}$  = labour consumption / units produced, in country 2, for good  $j$ ;  
 $s_2$  = salary rate in country 2, expressed in international currency;

Based on this concept it would be preferable the production of those goods obtained through to a higher relative consumption than of its partner, and obtaining other goods through international trade, whose production process would imply the use of even higher resources.

Comparative advantage indicators: Michaely Indicator

An indicator used in computing the comparative advantage is the one suggested by Michaely (1967), according to the formula:

$$MI_j^i = \left( x_j^i / \sum_{j=i}^N x_j^i - m_j^i / \sum_{j=1}^N m_j^i \right) \times 100$$

Where:  $x_j$  – represents the exports from section or product  $j$ ;  
 $m_j$  – represents the imports from section or product  $j$ .

The first part of the formula represents the percentage of the sector in the overall exports, and the next part represents the percentage of the sector in overall imports. According to Cohen (1969), the value of the indicator has to register values between -1 and 1, and in the case that neutral values are register they will be noted with 0.

Based on the previous formula corroborated with data from the National Institute of Statistics of Romania, data expressed in EUR, for the period 1991- 2012, based on the combined nomenclature, the results have been expressed in ANNEX 1, Table 2, where the Michaely indicator has been computed.

The results show that, for the following sections, Romania has registered a comparative advantage against the EU: wood and wood made articles, excluding furniture (section IX); textiles and textile articles (section XI); footwear, headgear, umbrellas and similar articles (section XII); base metals and articles of base metal (section XV); miscellaneous manufactured articles (section XX) especially furniture, lighting fittings and other similar articles, prefabricated buildings. As it is shown in the table, starting with 2009, Romania has lost its comparative advantage in the case of base metals and articles of base metal (section XV). For the rest of the sections from the combined nomenclature, Romania has registered a comparative disadvantage.

Based on these results, we can see that Romania has a comparative advantage in the sectors where intensive labour is needed. The severe part is that we import high technological goods, and suffering a comparative disadvantage in all technology intensive sectors. In other words, we sell cheap goods and import high priced goods from the developed countries, which lead to a chronic external trade balance deficit.

### Comparative advantage indicators: Lafay Indicator

When comparative advantages are analysed in the international trade flows, you can apply and utilise the Lafay indicator that can be calculated according to the formula:

$$LFI_j^i = 100 \cdot \left[ \frac{x_j^i - m_j^i}{x_j^i + m_j^i} - \frac{\sum_{j=1}^N (x_j^i - m_j^i)}{\sum_{j=1}^N (x_j^i + m_j^i)} \right] \cdot \frac{x_j^i + m_j^i}{\sum_{j=1}^N (x_j^i + m_j^i)}$$

Where:  $x_j$  – represents the exports from section or product  $j$ ;  
 $m_j$  – represents the imports from section or product  $j$ .

*According to Giurgiu (2008), "based on Lafay indicator, the comparative advantage of country  $l$  in the production of good  $j$  is majored by the deviation of the normalised balance of trade for good  $j$  from the normalised commercial balanced, multiplied by the share of trade (imports plus exports) of product  $j$  in total trade. By this, you can say that this indicator is complex and reflects the situation of the external trade balance by calculating the difference between the normalised trade balance and the global trade balance and probably this is the reason why it is often used in the analysis of the international trade"*

Continuing the reasoning of the study carried out by Giurgiu (2008) "the Lafay indicator allows the control over the distortions induced by the macroeconomic fluctuations and, from this perspective, it is superior to the indicator of the comparative advantage proposed by B. Balassa. While the comparative advantage is structural by definition, it is essential that the cyclical factors are eliminated, because they can affect the magnitude of short term trade fluctuations. The Lafay indicator takes into consideration these effects by calculating the differences between the normalized trade balance and the global trade balance."

When the time comes to choose between the two indicators, the decision can become extremely difficult. There are known in the international trade framework the different mutations taking place when it comes to international trade flows, of the production processes and intra-industry trade. According to Cherchez (2007) and Giurgiu (2008), at the level of the firm there are transformations regarding production, the firms frequently using processes of externalization or delocalization of production to different geographical regions.

Also, the production dispersion at the level of the entire planet contributes to production segmentation in different locations, breaking the final production from one country into multiple production processes of semi fabricated goods in diverse locations on the globe.

According to Giurgiu (2008) "the distortion introduced in the analyzing process depends on the level of these data aggregation because for an aggregate relative group of goods the intra-industry flow size becomes significant and any other evaluation of the performance of trade based only on exports becomes an absolute indicator."

Based on the previous formula corroborated with data from the National Institute of Statistics of Romania, data expressed in EUR, for the period 1991 until 2012, based on the combined nomenclature, the results have been expressed in ANNEX 1, Table no. 3, where the Lafay indicator has been computed.

The results are the same as for the Michaely indicator. Sections IX, XI, XII, XV and XX register the same trend. The comparative advantages regarding Romania's trade flows with the EU maintain a consistent progress for the above sections, only when it comes to section XV, Romania, starting with 2009, registers a comparative disadvantage.

If we observe closely, the comparative advantage of Romania does not derive from the sections with an intensive technology attribute like: machinery and mechanical appliances, electrical equipment, sound and image recorders and reproducers (section XVI); vehicles and associated transport equipment (section XVII); optical, photographic, cinematographic, medical or surgical instruments and apparatus and similar, clocks and watches, musical instruments, parts and accessories thereof (section XVIII).

The question that needs to be answered is what are the next actions of the Romanian government? Does it support those sections where the country registers a comparative advantage or will it support the development of companies in technology intensive business fields, in order to gain a comparative advantage there? This question will be very difficult to answer, requiring the strong collaboration between the private entities and the government, a collaboration that does not exist at this time.

### **The concept of utilizing the natural resources of a country**

The model developed by the Scandinavians Eli Heckscher and Bertil Ohlin presents the premise that all the countries should develop those goods where they register an abundance in production factors.

Based on the model developed by them, besides the idea of comparative advantage and the policy of trade liberalisation adopted from the classical economists, it is taken into consideration the intensity of production factors, more precisely, natural resources abundance.

Based on the analysis carried out by Popescu (2009), the concept tries to answer a series of questions regarding the rational allocation of resources, the factors that the terms of trade depend on, the results of international trade participations, the trade impact on the economic development.

According to Giurgiu (2008), the premises that the ideology structure is based on are the following:

- the factor necessity for the production of a good is different from a country to another;
- the natural resources that the countries are invested with are different from a country to another.

Based on these premises, the countries will have a comparative advantage in producing those goods that benefit from an abundance of production factors, either capital or labour. When trade exchanges are carried out, according to the H-O model, the phenomenon of adjusting the factor prices will take place, based on the demand and supply law (Samuelson and Nord House 2000) "The prices in the two regions have to equalize, like the water into communicating vessels has to reach the same level."

Both shorter and longer effects of international trade with goods and services will bring benefits to all participating countries. The comment made by Popescu (2009), based on the statement and ideas promoted by the H-O model, “countries left behind tend to catch up the developed countries”.

### **The concept of utilizing national labour**

One of the Romanian authors that express the frustration experienced by the agricultural countries against the industrial countries, between the interventionism and economic liberalisation, was Mihail Manoilescu. The author is aware that the goods from the industrialised countries are sold at much higher prices than agricultural goods, offering to the industrialists superior net revenues than for the agricultural produces. In other words, technology intensive goods are more valuable than labour intensive goods. According to his own quotation, Manoilescu (1986) : “industry in general has been built on the assumption that is possible to sell industrial goods so that the annual labour of an industrial worker to buy the labour of 10 farmers, this equivalence offers the key to understand the prosperity of western Europe in the 19<sup>th</sup> century”.

The model of improving the trade of under developed countries and developing countries, named by the author agricultural, was the development of industry and labour force specialization because “the wealth of all the nations and all the classes is based on their labour productivity”.

The author states that the highest net labour productivity per employee can become an indicator in determining the importance of the national economy branches. He defines the labour productivity as the division between the final value (Pt) and the amount of necessary work (At = workers \* time), according to the formula:

$$P = Pt / At$$

From which results the following:

$$Pt = P * At$$

Where:

P = labour productivity

Pt = final value

At = amount of necessary work

Industrial development accompanied by an increase of labour competitiveness in those technology intensive fields represents the key to success for every nation involved in international trade, according to Manoilescu.

The more an industrial branch obtains an output that implies the use of fewer resources, the more it will increase its degree of goods competitiveness and its probability of commercializing those goods in spite of fierce international competition. Manoilescu, being a Romanian author, argues the necessity of industrial production augmentation, the encouragement of developing new industrial branches, so that Romania cannot become a net importer, with a chronic external trade balance deficit, towards the developed countries with which it trades.

Following his assertion, the author denies the fact that through international trade every participating state wins. Manoilescu argues that only the developed states win

from international trade, having a better industrial production and labour productivity, the rest of the participating partners, poor developed and developing countries, registering external trade balance deficits. His theory is a win-lose situation for those countries that do not match a competitive industrial production and a specialized labour force.

## Conclusions

The main conclusions of this paper can be summarized as the following:

-all the competitive combined nomenclature sections are work intensive. In order to keep this edge, Romania needs to keep its minimum wage salary down, because if it will be raised, then the companies will lose their comparative advantage.

-based on the concepts of Manoilescu, Romania needs to encourage the sustainable development of those industries that need the best prepared workforce. In this scenario, the companies that are a part of the export production for the combined nomenclature sections XVI, XVII and XVIII should be encouraged by the state through fiscal, economical policies, and if it is possible, with the implication of the central bank to keep a high value for the euro currency.

-a combination with Manoilescu theory and the concept of utilizing the national resources, should be the key to success. Having almost all the natural resources that it needs, Romania from what it seems, doesn't produce high technology intensive goods. That being said, Romania prefers to sell its raw materials abroad, and in return, the country imports technology intensive goods at higher prices. This policy needs to change, because at this pace, in the long run, Romania's industry will cease to exist.

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## ANNEX 1

Table 2: Evolution of Michaely Indicator with the UE from 1991 - 2012

Section CN	Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
I		0,02	0,02	0,01	0,01	0,00	0,01	0,01	0,00	0,00	0,00	0,00	-0,01	0,00	0,00	-0,01	-0,01	-0,01	-0,02	-0,02	-0,01	-0,01	-0,01	
II		-0,07	-0,07	-0,08	0,00	0,01	0,00	0,00	0,00	0,01	0,00	0,00	0,00	0,00	0,00	0,00	0,01	-0,01	0,00	0,01	0,01	0,01	0,01	
III		0,00	-0,01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	#VALUE!	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
IV		-0,07	-0,04	-0,03	-0,04	-0,04	-0,03	-0,02	-0,02	-0,02	-0,01	-0,01	-0,01	-0,01	-0,01	-0,02	-0,02	-0,02	-0,01	-0,01	-0,01	-0,01	0,00	0,00
V		0,08	0,03	0,06	0,04	0,00	-0,01	-0,02	0,00	-0,01	-0,01	0,00	0,04	0,02	0,02	0,01	0,01	0,02	0,03	0,01	0,00	-0,01	-0,02	
VI		-0,07	-0,03	-0,06	-0,06	-0,06	-0,07	-0,07	-0,07	-0,09	-0,07	-0,07	-0,08	-0,08	-0,07	-0,05	-0,04	-0,06	-0,07	-0,09	-0,08	-0,07	-0,08	
VII		-0,01	-0,01	-0,02	-0,02	-0,01	-0,02	-0,02	-0,02	-0,03	-0,03	-0,04	-0,04	-0,04	-0,04	-0,06	-0,05	-0,02	-0,01	-0,02	-0,02	-0,02	-0,02	
VIII		0,00	-0,01	-0,01	-0,02	-0,03	-0,04	-0,03	-0,03	-0,04	-0,03	-0,04	-0,04	-0,04	-0,02	0,01	0,01	-0,01	-0,01	-0,01	-0,01	-0,01	-0,01	
IX		0,01	0,03	0,01	0,01	0,01	0,01	0,02	0,02	0,03	0,03	0,02	0,02	0,03	0,02	0,00	0,00	0,01	0,01	0,01	0,01	0,01	0,01	
X		0,00	-0,01	-0,01	-0,01	-0,01	-0,02	-0,02	-0,02	-0,02	-0,02	-0,01	-0,02	-0,02	-0,02	-0,02	-0,02	-0,01	-0,02	-0,02	-0,02	-0,02	-0,01	
XI		0,12	0,16	0,28	0,29	0,27	0,33	0,33	0,32	0,32	0,30	0,32	0,31	0,31	0,24	0,11	0,11	0,09	0,07	0,05	0,03	0,03	0,03	
XII		0,02	0,02	0,05	0,08	0,08	0,09	0,09	0,09	0,09	0,09	0,10	0,10	0,10	0,07	0,08	0,07	0,05	0,04	0,03	0,03	0,03	0,03	
XIII		0,01	0,03	0,02	0,02	0,02	0,02	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,00	-0,01	-0,01	-0,01	-0,01	-0,01	-0,01	-0,01	-0,01	
XV		0,10	0,11	0,09	0,10	0,15	0,14	0,15	0,14	0,11	0,11	0,08	0,06	0,05	0,07	0,00	0,00	0,03	0,02	-0,03	-0,02	-0,01	-0,02	
XVI		-0,09	-0,09	-0,13	-0,17	-0,13	-0,16	-0,09	-0,06	-0,03	0,02	0,01	0,02	0,03	0,06	-0,05	-0,01	-0,03	0,00	0,01	0,00	0,00	0,00	
XVII		-0,05	-0,03	-0,04	-0,04	-0,04	-0,04	-0,03	-0,04	-0,03	-0,04	-0,05	-0,05	-0,04	-0,03	-0,05	-0,03	-0,06	-0,04	0,08	0,06	0,05	0,05	
XVIII		-0,01	-0,01	-0,02	-0,03	-0,02	-0,03	-0,02	-0,02	-0,02	-0,02	-0,02	-0,02	-0,02	-0,02	-0,01	-0,01	-0,01	-0,01	0,00	0,00	0,00	-0,01	
XX		0,17	0,18	0,14	0,11	0,10	0,09	0,07	0,06	0,06	0,06	0,06	0,06	0,06	0,05	0,04	0,04	0,04	0,03	0,03	0,03	0,03	0,03	
XXII		-0,02	0,00	0,00	-0,01	-0,01	-0,02	-0,02	-0,02	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,01	

Source: Own computations based on the statistical inputs made by the National Institute of Statistics from Romania, monthly bulletin of international trade

Table 3: Evolution of Lafay Indicator with the UE from 1991 - 2012

Section CN	Year																						
		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
I		0,88	0,82	0,32	0,31	0,21	0,29	0,38	-0,04	0,22	0,04	-0,17	-0,35	0,13	-0,23	0,47	0,33	0,57	0,88	1,16	0,71	0,39	0,36
II		3,74	3,04	-3,66	0,01	0,26	0,08	0,19	0,15	0,51	-0,01	0,19	0,18	-0,12	-0,07	0,22	0,40	0,24	0,09	0,38	0,55	0,59	0,29
III		0,16	0,34	0,13	-0,21	-0,05	-0,15	-0,18	-0,20	-0,08	-0,12	-0,09	#VALUE!	-0,09	0,01	0,00	0,02	0,03	0,01	0,05	0,03	0,10	0,05
IV		3,36	1,69	-1,53	-1,80	-1,78	-1,59	-0,98	-1,15	-1,04	-0,71	-0,59	-0,59	-0,65	-0,88	0,84	0,74	0,60	0,52	0,53	0,29	0,20	0,22
V		4,22	1,27	3,01	1,83	-0,12	-0,26	-0,74	-0,10	-0,28	-0,39	0,23	2,09	0,84	0,99	0,65	0,63	0,92	1,19	0,38	0,05	0,42	1,04
VI		3,62	1,60	-2,77	-2,85	-2,76	-3,65	-3,25	-3,70	-4,33	-3,65	-3,66	-4,21	-3,75	-3,60	2,24	1,98	2,74	3,08	4,61	3,74	3,67	3,73
VII		0,54	0,33	-0,79	-1,12	-0,62	-1,08	-0,98	-1,07	-1,46	-1,42	-1,83	-2,10	-2,18	-2,06	2,78	2,49	0,94	0,61	1,07	1,11	0,94	0,82
VIII		0,16	0,38	-0,68	-1,23	-1,33	-1,83	-1,63	-1,59	-1,79	-1,71	-1,96	-2,01	-1,77	-1,11	0,25	0,46	0,42	0,34	0,49	0,49	0,46	0,40
IX		0,73	1,19	0,70	0,66	0,55	0,72	0,80	1,11	1,72	1,41	1,19	1,11	1,27	1,02	0,05	0,01	0,54	0,37	0,50	0,56	0,68	0,74
X		0,16	0,26	-0,37	-0,70	-0,61	-0,98	-0,82	-0,92	-0,92	-0,79	-0,72	-0,86	-0,92	-0,99	1,14	0,98	0,68	0,76	1,04	0,89	0,80	0,67
XI		5,98	7,39	13,48	14,39	13,50	16,10	16,19	15,98	15,82	15,19	15,73	15,44	15,53	11,86	5,49	5,07	4,30	3,17	2,23	1,65	1,52	1,64
XII		0,76	0,85	2,62	3,98	3,74	4,48	4,39	4,34	4,61	4,58	5,00	4,92	4,73	3,59	3,89	3,52	2,42	1,88	1,67	1,47	1,40	1,37
XIII		0,49	1,36	1,14	0,92	0,82	0,77	0,69	0,68	0,64	0,49	0,38	0,34	0,32	0,18	0,56	0,54	0,45	0,59	0,48	0,40	0,40	0,33
XV		4,87	5,12	4,12	4,96	7,47	6,86	7,63	7,14	5,44	5,56	3,82	2,84	2,57	3,44	0,06	0,09	1,32	1,02	1,26	1,20	0,71	0,75
XVI		4,58	3,97	-6,36	-8,44	-6,53	-8,10	-4,47	-2,76	-1,47	1,22	0,70	1,12	1,53	3,10	2,44	0,37	1,39	0,02	0,29	0,02	0,15	0,24
XVII		2,62	1,48	-2,06	-2,10	-2,12	-1,74	-1,70	-2,07	-1,33	-1,91	-2,44	-2,25	-1,85	-1,59	2,37	1,42	2,78	2,05	3,81	3,18	2,53	2,43
XVIII		0,33	0,45	-0,73	-1,31	-1,13	-1,29	-1,13	-0,98	-1,03	-0,96	-0,81	-0,83	-0,87	-0,76	0,54	0,41	0,44	0,34	0,20	0,22	0,23	0,26
XX		8,42	8,32	6,72	5,34	4,74	4,46	3,59	3,18	3,20	2,76	2,87	2,81	2,81	2,68	2,15	1,88	1,71	1,44	1,63	1,56	1,47	1,53
XXII		0,90	0,23	0,05	-0,47	-0,51	-0,90	-1,19	-1,06	-0,23	0,04	0,10	0,09	0,10	0,05	0,06	0,04	0,01	0,00	0,02	0,03	0,08	0,30

Source: Own computations based on the statistical inputs made by the National Institute of Statistics from Romania, monthly bulletin of international trade

## CONCEPTS AND METHODOLOGIES REGARDING THE IMPROVEMENT OF ROMANIAN FOREIGN TRADE (II)

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**Abstract:** *The aim of this paper is to emphasize the possible engines that can boost Romanian foreign trade from a chronic deficit to a more balanced one. In the beginning, we present the main theories and models that tackle the subject. In this matter, the paper starts with the analysis of neo-factors, Porter, the gravitational model, the input-output model, and the terms of trade in order to see the historic thought of trade model development. Following these models, a more mathematical approach is made, using a thorough analysis at the product level. All the computations are based on the combined nomenclature with its XXII classes, being the most exact determinant of traded goods. The paper uses statistic indexes as: Hirschman concentration index, elasticity coefficient, the degree of trade openness, in order to determine the specialization effect of the Romanian classes for a period of twenty one years, starting in 1991 and ending in 2012. This is the point where former, current and future specialized engines of potential trade growth can be established. It is crucial for a country to determine its potential in an open international arena, in order to take the necessary steps to encourage or discourage productive or non-productive areas of certain industry branches. Based on the results and on the previous methodology, a mix of theory with solid mathematical analyses, gives the opportunity to draw up different sets of sustainable development formulas in order to obtain a higher concentration ratio regarding several classes from the combined nomenclature. For Romania to obtain higher gains from international trade, a more sustainable integration in the European Union, it has to stop its chronic balance of trade deficit. Looking at and analysing the potential development of a combined nomenclature class or classes will help improving Romania's chronic deficit, offering a long term prospective of sustainable development, reducing its foreign debt, improving its balance of trade accounts, and transforming its import driven economy to a more competitive export oriented economy. Achieving these standards can ensure Romania's future growth and accession to a more privileged seat in the European Union and in the international arena.*

**Keywords:** *sustainable development, Hirschman concentration index, terms of trade, degree of trade openness, elasticity coefficient, combined nomenclature*

**JEL classification:** *F10, F19*

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### **The neo-factor concept in the international trade**

The first author who emphasized the importance of neo-factors in the strong national economy framework was Michael Posner (1961). He highlighted the benefit of the correlation between investment in education, research and development with future outputs of intensive technology, goods and products, which are commercialized on the domestic and international market at a superior price.

In this way, according to Giurgiu (2008), the countries that made the first investments would hold an absolute advantage over the partner countries in the international trade. The tendency to imitate the newest products will make their initial advantages dissipate in time.

Following the same pattern, the product life cycle of Raymond Vernon (1966) makes it in the economic theory arena. According to the author, there are three stages in the life of new goods and products. In the first stage the new goods are produced in developed countries because there the markets are mature enough. In this stage the product can suffer different changes, this product not being a standardized one. According to Cerchez (2007) and Giurgiu (2008), the potential clients for these goods are only those consumers with high incomes.

In the second stage the product becomes standardized, the companies that produce it obtain economies of scale and economies from the efficiency curve, the price tends to get lower and exports to other developed countries start to rise. A tendency in the second stage targets the expansion of production facilities in the vicinity of the main markets, so that the product is no longer produced in the country of origin.

The last stage implies that the product has transformed from a pinion one into an ordinary one, being entirely produced in the poor developed and developing countries, the developed countries using imports in order to procure the products that they need.

According to Cerchez (2007), using the notion of technological gap, Vernon eliminated the premise of the H-O model, stating that the technology used in the production of goods process should be similar. In this equation besides the technological gap comes up the demand gap, because time passes until the demand is familiarized with the new product. From these 2 premises it results that the net gap is majored according to the author as a difference between the technological gap and the demand gap.

The same idea was developed by another theorist, Michael Krugman (1974) who states that the technological monopoly registered by innovative entities can suffer from the erosion of international transfer of technology.

The structure of human resource has a major significance in the thought of these authors, offering a possibility for development to those nations that invest in the preparation and training of this important work resource.

If countries want to hold their leader position they will have to make permanent investments in education, research and development so that the gap between them and the competing countries to be kept, or in a best case scenario to become even larger.

### **The concept of national competitive advantage**

One of the recent theories regarding international trade is the one based on Michael Porter's (1985) theory regarding the national competitive advantages, which combines the neo-factors with the concept of utilizing the natural resources and the labour work force. In the middle of his theory is the "Porters diamond", a structure

that combines a series of essential elements so that a country can impose its supremacy in international trade. His study focused on the industry of production of the first 10 most industrialized countries in the world.

The author identifies 4 essential attributes for a company to be able to register competitive advantages, these being the following: production factor endowments as human resources road rail aerial and sea port infrastructure, educational infrastructure, climate, natural resources, etc.

Porter takes into account the structure of industrial branches, analyzing the structure of related industries. The author states the fact that the industrial production cannot become a competitive one at the national and international level, unless there is interdependence between industrial activities at branch level. According to Giurgiu (2008), as for example, the United States' position is mentioned in the Information Technology sector, which has its core functions focused on semiconductors production, and the success of Switzerland in the pharmaceutical industry because it focuses is on developing its base, which is the chemical industry.

The third attribute's focus is on the conditions regarding demand formation. It is an important asset in Porter's view, arguing that a pretentious demand will force the company's policy into making permanent investments in research and development, so that their products will incorporate a higher technological degree and a superior quality. The last attribute emphasized by the author is the one referring to strategy, structure and competition among companies at national level. According to Porter, the steepest the competition among the companies at national level, the bigger the permanent investments in research and development will have to be in order to maintain or to gain new market share.

In this model there are 2 more factors represented by the economic policy and the interventionism of the government on one hand, and chance on the other hand. Usually, the state interventionism in economy can offer a better climate for sustainable development. Also the state policy regarding acquisitions can influence the progress of certain industry branches. The investment in education represents another method by which the state can influence the activity of companies and national economy level.

The concept of chance in Porter's theory highlights the advantages that a company can register the moment when it discovers new processes or resources through its research and development programs or by finding new natural resources unavailable at regional or international level, chances that can offer a competitive advantage over its main rivals.

### **Terms of trade index**

In order to hold a clear picture of the potential of the Romanian transports on the international markets the current paper emphasizes the analysis and interpretation of some index utilized in the measurement of international trade efficiency.

The first index used in the analysis of the international trade of one country with another or with an economic block, is the terms of trade. According to Stoian, Puiu, Motiu, (1973), the terms of trade represent "the relationship between the export and import prices respectively the buying power of one good in exchange to another, of some exported goods in exchange to the same imported goods, of export in its hole compare with the import".

According to Bari (2005), Cerchez (2007), Giurgiu (2008), this index can determine the value of necessary goods that need to be exported so that a country can import the same value of goods, according to the formula

$$I_{TT} = \frac{\text{export price index}}{\text{import price index}} \times 100$$

According to Genereux (2000), the formula states that the ratio between the export price index and the import price index records that  $ITS > 100\%$ , than it means the international trade offers an advantage to the exporting country because the value of the imports has reduced seems its base value. If from this ratio results that  $ITS < 100\%$ , the terms of trade of the analysed country suffers on behalf of international trade, because the country needs a supplementary quantity of exported goods in order to import the same quantity of goods from abroad.

According to Begu (1999), the terms of trade indices are derivatives from the statistical index that are subjected to the following premises:

- the economic functions are differently fulfilled by the export and import operations;
- the import operation implies the realisation of payments, while the export operation implies revenues.

Cerchez (2007) shows that the gross term of trade is calculated according to the formula as the share between the average export price index and the average import price index:

$$Irsb = \frac{I_{p_0}^E}{I_{p_0}^I} \cdot 100 = \frac{\frac{\sum q_1 p_{0E}}{\sum q_0 p_0}}{\frac{\sum q_1 p_{0I}}{\sum q_0 p_0}} \cdot 100$$

$Irsb$  - gross terms of trade;

$I_{p_0}^E$  - the average export price index base period;

$I_{p_0}^I$  - the average import price index base period;

$q_1$  - the quantity of goods exported or imported in the current period

$q_0$  - the quantity of goods exported or imported in the base period

$p_0$  export or import prices in the base period

The same author highlights the aspect according that the net terms of trade is calculated based on the formula as a ratio between the average export price index and the average import price index.

$$Irsn = \frac{I_{p_1}^E}{I_{p_1}^I} \cdot 100 = \frac{\frac{\sum q_1 p_{1E}}{\sum q_1 p_0}}{\frac{\sum q_1 p_{1I}}{\sum q_1 p_0}} \cdot 100$$

$Irsn$  - net term of trade

$I_{p_1}^E$  - the average export price index current period

$I_{p_1}^I$  - the average import price index current period

$p_1$  - export or import prices in the current period

$p_0$  - export or import prices in the base period

$q_1$  - the quantity of goods exported or imported in the current period

$q_0$  - the quantity of goods exported or imported in the base period

If we analyse the economic literature according to Cerchez (2007), Giurgiu (2008), the net terms of trade offers the best result when it majores the efficiency of a country's international trade relations. According to Giurgiu (2008), "it can be considered as an index of the external purchasing power, achieved by a nation through exports. If the important goods are in average more expensive than the exported goods, exchange conditions are unfavourable: in order to procure goods from abroad, the analysed country needs to produce and sell a higher number of goods and services".

Based on the studies carried out by Begu (1999), Cerchez (2007), Giurgiu (2008), there are other statistical indexes like the price scissors, which is used to determine the regression in the case of net terms of trade, based on the following formula:

$$FP = (1 - IRSN) \cdot 100$$

Also the authors analyse the impact, the revenue terms of trade also known as the index of the export purchasing power and the factor index of the terms of trade.

The index of the export purchasing power, according to the following formula, is obtained as the multiplayer between the average export price index and the net terms of trade:

$$Ivrs = (I_p^E \cdot Irsn) \cdot 100 = \frac{\sum q_1 p_1}{\sum q_1 p_0} \cdot \frac{\frac{\sum q_1 p_{1E}}{\sum q_1 p_0}}{\frac{\sum q_1 p_{1I}}{\sum q_1 p_0}} \cdot 100$$

Another index used in the measurement of the purchasing power is the factorial index of terms of trade, which according to the following formula represents the multiplier between the net terms of trade and the labour productivity index.

$$IFRS = IRSN \times I^W$$

When the time comes to analyse the results and we see that  $IFRS > 100\%$ , it is considered a positive evolution of the calculated index. According to the formula the results can be achieved due to a positive evolution of either terms, or only one of them, but with a more significant growth, so that the final result should be interpreted as a favour of the one.

Based on the information stipulated by Giurgiu (2008), in the factorial analysis of terms of trade you can utilise other equations such as: the degree of exports in the internal production and the degree of exports in the internal consumption. The first part you can obtain it as a share between total exports or those of the industrial branches and total internal production or industrial branches. The second part is obtained as the ratio between total exports or those of the industrial branches and total internal consumption or that of the industrial branches.

Table no.1: The evolution of the export / import price index and Romania's terms of trade during 2001-2011

Year	Export price index (Ipe)	Import price index (Ipi)	Annual rate Ipe	Annual rate Ipi	Net terms of trade (%)	Revenue index from the terms of trade
2001	97,16	97,51	-	-	99,64	96,81
2002	96,61	96,31	-0,56%	-1,23%	100,31	96,92
2003	101,84	102,92	5,41%	6,87%	98,94	100,76
2004	110,73	112,22	8,73%	9,03%	98,67	109,26
2005	120,58	122,39	8,89%	9,06%	98,52	118,79
2006	127,10	130,21	5,41%	6,39%	97,62	124,07
2007	135,89	138,27	6,91%	6,19%	98,28	133,55
2008	153,09	155,92	12,66%	12,76%	98,19	150,32
2009	146,62	145,41	-4,23%	-6,74%	100,84	147,85
2010	152,57	152,57	4,05%	4,93%	100,00	152,56
2011	167,37	170,35	9,70%	11,65%	98,25	164,45

Source: UNCTAD, <http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx> and author's computations.

According to table no.1, the statistical data has been taken from UNCTAD, the base year, in computing the index, has been selected for the year 2000, and the reference

currency has been selected the dollar. According to the above data the net terms of trade registers a cyclical evolution, but mainly under the level of 100%. This fact indicates an unfavourable situation for our country. Only in the years 2002, 2009 and 2010 Romania registers values that exceed 100%, a fact that implies that our country in 8 out of the 11 analysed years has recorded an increase in the price of imports, being necessary to produce more in order to balance the result.

The evolution registered in the period 2009, 2010 is the result of only the economic crisis, which has significantly reduced the volume of imported goods in Romania. A positive evolution that needs to be mentioned is that of the export and import price index. Both of the indexes have registered an upward trend and not a disproportionate one.

According to Giurgiu (2008), after analysing the export and import price index, it has been noticed a decrease of export prices and an increase of import prices, a fact signed by an increase of external balance of trade deficit. In this analysis the base year that the index has been reported to was the year 1990.

### **The coverage degree index**

There are other indexes used in computing the efficiency of commercial flows like the coverage degree index. This index can offer important details regarding the analysis of international trade flows on which the government can adopt important majors in order to recover and improve its commercial policy.

In this case the coverage degree index is represented according to the formula by the ratio between the export value index and the import value index.

$$IGA = \frac{I^v(X)}{I^v(M)} = \frac{GA_{t_1}}{GA_{t_0}}$$

Based on these computations it can be observed the quarterly, semestral and annual evolutions of the coverage degree index. Achieving a balance between the imports and exports represents the primary goal of any commercial policy, the slippages from these goals having serious consequences at the level of the national economy.

When we try to compute the balance of the commercial flows you can use the formula of the relative coverage degree as a ratio between the exports value and imports value.

$$GA = \frac{\text{export value (FOB)}}{\text{import value (CIF)}} \times 100$$

After resolving the computations if it is obtained a result that points  $GA > 100\%$  it means a positive effect in the international trade flows, meaning that the country will register an external trade balance surplus. If the result shows that  $GA < 100\%$ , it means that the country will register an external trade balance deficit.

Table no.2: The evolution of the openness degree index and the coverage degree index of Romania during 1991-2011

Year	The openness degree index	Share of exports in the GDP	Share of imports in the GDP	External trade balance	The global coverage degree index	The coverage degree index with the EU
1991	30,47%	12,89%	17,58%	-4,69%	68,86%	93,52%
1992	41,81%	17,16%	24,65%	-7,49%	69,93%	59,34%
1993	37,14%	15,88%	21,26%	-5,38%	74,57%	68,12%
1994	28,40%	13,15%	15,25%	-2,10%	86,52%	95,31%
1995	39,63%	17,23%	22,40%	-5,17%	76,95%	83,05%
1996	44,10%	18,26%	25,84%	-7,58%	70,69%	81,95%
1997	49,48%	21,16%	28,32%	-7,16%	74,74%	81,19%
1998	42,54%	17,57%	24,97%	-7,40%	70,36%	78,78%
1999	50,31%	22,41%	27,90%	-5,49%	80,36%	89,06%
2000	68,73%	30,43%	38,30%	-7,87%	79,44%	89,61%
2001	74,93%	31,66%	43,27%	-11,61%	73,19%	86,31%
2002	73,26%	32,03%	41,23%	-9,20%	77,68%	89,40%
2003	61,87%	26,24%	35,63%	-9,39%	73,65%	86,41%
2004	59,90%	25,08%	34,82%	-9,74%	72,05%	80,93%
2005	55,62%	22,58%	33,04%	-10,46%	68,33%	74,28%
2006	63,12%	24,50%	38,62%	-14,12%	63,44%	64,63%
2007	71,72%	26,23%	45,49%	-19,26%	57,66%	58,30%
2008	65,67%	24,55%	41,12%	-16,57%	59,69%	60,79%
2009	58,48%	25,04%	33,44%	-8,40%	74,68%	75,87%
2010	70,20%	31,13%	39,07%	-7,94%	79,68%	79,34%
2011	73,11%	32,97%	40,14%	-7,17%	82,16%	80,43%

Source: author computations

The computations in table no 2 are based on the ratio between the value of Romanian exports in the FOB conditions and the external imports in the CIF conditions, all of them expressed in euro currency. As the table shows, both the global coverage degree and the EU coverage degree do not achieve 100%. In the entire analyzed period, the coverage degree registers values below 80%, a fact that is reflected in the external trade balance.

If until 2004 the situation of maintaining a relative good coverage degree of imports through exports destined to the European market had been achieved, starting with 2005 the situation has deteriorated due to the elimination of the external tariff duties due to the negotiated agreement signed by Romania at the accession treaty (1993).

These facts were corroborated with a flexible monetary policy that offered a lax access to liquidity. According to Giurgiu (2008) this situation influenced the population in purchasing electronic consumer goods, auto vehicles, a fact that has led to a decrease of the coverage degree from approximately 80% in 2004 to approximately 60% in 2008. Only when the financial crises made its presence felt, the consumption was dramatically reduced, having a direct impact on the coverage degree index, improving its situation.

## Conclusions

Year after year, Romania's situation regarding its chronic deficit is getting worse. From the data mentioned above, the coverage degree of imports through exports has never surpassed the barrier of 80%. This signifies that we import more than we export, and all the remaining percentage adds up at the national debt. For all the remaining percentage, Romania has borrowed money from foreign banks and international institutions. If this situation is maintained, the future generations of Romanians will have to pay the debt of this consumption boom.

The situation from 2009 and 2010 reflects the corrections suffered by a massive contraction of consumption. If this has happened only by the lack of consumption credits, by a decrease of revenues, than the Romanian government should think about introducing a progressive revenue tax in order to cut down the imports done by the people with high revenues.

Another situation that can be taken in consideration will be the reintroduction or upgrading non tariff barriers, especially excise duties, in order to diminish the 20% gap, so that the coverage degree of imports through exports should register a balanced result.

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## GLOBAL LOGISTICS, COMPETITIVENESS AND THE NEW INCOTERMS

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**Abstract:** *If in the first stages of the internalization of business, logistics had a minor influence in the international success of the company. In a globalized economy, strategy and the logistics costs are essential factors for competitiveness. Nowadays, logistics determines the place which a country or a company holds in the worldwide competitive hierarchy. The new Incoterms – 2010 – establish – in the field of commercial practices this reality: performance is now assessed in global terms (not national), competition is global, not international. Ultimately, the new Incoterms encourage/stimulate the orientation of firms towards increasing competitiveness by employing an appropriate logistics strategy; the degree to which firms will manage – as quickly as possible – to be integrated in this new trend will also be the measure of their competitive capacity in the newly emerged context. The category of global firms should not include just the large transnational corporations, but also the medium and small enterprises that operate exclusively or mainly on the global market. Within this plan there can be created and developed competitive advantages which are primarily based on the reaction speed to the changes in progress, the capacity to adapt to new things and the availability for intercultural communication. These last conditions represent characteristics of the Romanian business approach.*

**Keywords:** *global logistics; competitiveness; incoterms; international business*

**JEL classification:** *F59, L81, F23*

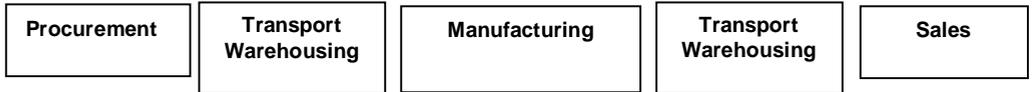
### **1. The development of logistics – from international to global**

The recent development of logistics marks the path from internationalization towards globalization in the world economy. If in the beginning logistics had only a minor influence in the international success of the company, gradually it became one of the major factors ensuring the latter's competitiveness at a global scale.

The first stage is that of the transition from the "international transports" approach of the process of physical merchandise delivery to the concept and strategy of international logistics. If in the 70's the main commercial powers (the advanced economies, corporations) were preoccupied with increasing the efficiency of the different logistics components –ensuring the necessary raw materials, handling the merchandise, storing it, packaging it, and above all transporting it – in the 80's the emphasis is on configuring and optimizing the logistics flows and on the integration and coordination of activities related to procurement, production and distribution.

With these objectives in mind, primarily beginning with the 1980's, many firms started to establish logistics departments or began to work with companies specializing in this field, and subcontracting all logistical activities to the latter (see Figure 1).

**1970: Classical Logistics**



**1980 : Logistics as a cross-divisional function**



**Figure 1 : Logistics - the first stage**

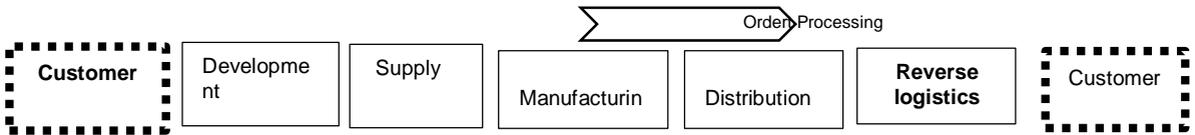
Source : Source : Baumgarten, H. , Beyer, J. and Stommel, H. (2004),

The second stage developed in the 1990's, along with the breakthroughs in the IT field, which allowed control over the flows of information in the supply chain. Nowadays a more holistic approach is being pursued, where the emphasis is on the integration of merchandise and information flows with the aim of optimizing the entire supply chain.

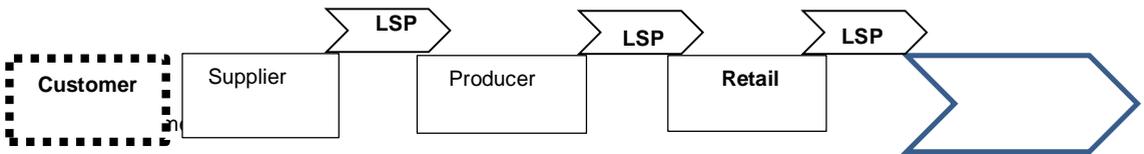
In international business the supply chain management approach regards the supply chain as constituting a continual process, starting from the imports order and finishing with the delivery of the merchandise and payment of price. As such, a systemic approach is needed, implying a single planning of resources for the entire company and a global optimization of activities. An approach of this kind can be employed within a single entity, but it can also be applied to a group of more entities, constituting what is called a virtual enterprise or an extended enterprise (the supplier of the supplier> the supplier> the enterprise> the client> the client's client).

Thus, logistics is becoming a major component in the business strategy of companies, allowing the attainment of competitive advantages by capitalizing on the services/information component – formalities, documents, security, etc.-international transactions. (see Figure 2)

**1990 : Phase of functional integration**  
**Logistics integrates functions to process chain**



**1990 : Phase of multidisciplinary integration**  
**b. Logistics integrates enterprises into value chains**



**Figure 2 : Logistics - the second stage**

Source : Baumgarten, H. , Beyer, J. and Stommel, H. (2004),

The beginning of the 2000's brought about a new stage: the flows of goods and information are planned and controlled not only within departments at the company level, but also at the supplier-client level. This integration is possible by implementing the Supply Chain Management based on ERP systems, systems connected through EDI links (Electronic Data Interchange), APS (Advanced Planning Systems), which have allowed this development. On the basis of these, presently, the process of integrating the logistical components is realized at the global level, relying on an integrated global network.

## **2. Logistics and Competitiveness**

In a globalized economy, logistics and the logistics costs are essential factors for competitiveness; furthermore, in the production/commercialization activities, the highest share is that belonging to the costs of logistics activities. The logistics costs account for 5-20% of the total costs in commercial or manufacturing enterprises.

Logistics also determine the position a country holds in the worldwide competitive hierarchy. In what concerns our country, if we analyze the data pertaining to two important reports relating to competitiveness, we arrive to some interesting conclusions.

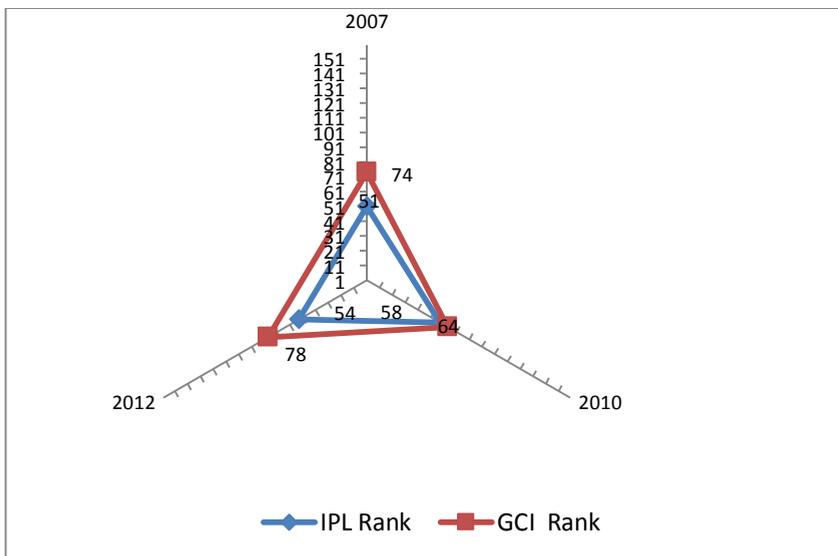
In the Rapport „Connecting to Compete” an index of logistics performance is computed, taking into consideration the following criteria: customs, infrastructure, international shipments, logistics competence, tracking & tracing, timeliness.

In the year 2007 the first edition of the rapport was issued and a Logistics Performance Index was computed for Romania, resulting in a value of 2.91 points, ranking it on the 51<sup>st</sup> place among 150 states; Romania took the 35<sup>th</sup> spot for cross border transportation but only qualified for a mere 123<sup>th</sup> spot when it came to internal

costs. For infrastructure the overall world ranking was 50 and for criteria such as the logistic competence – the 52<sup>nd</sup> place – customs activity and tracking deliveries (the 56<sup>th</sup> for both criteria).

Along costs, the score for competitive advantages (ranked 66<sup>th</sup>) pulled down the list the final score. It must be specified that countries where costs are high risk losing the chance of capitalizing on the opportunities of globalization. In its second edition –in the year 2010- the Rapport’s Logistics Performance Index evaluates Romania as having a score of 2.84, placing it on the 58<sup>th</sup> spot among a total of 155 states. In the year 2012, Romania’s LPI was 3, a value ranking it on the 54<sup>th</sup> place.

On the other hand, in the Global Competitiveness Report, the position held by Romania in the years mentioned above was as follows: in the 2010, Romania’s position in the global ranking of economic competitiveness has improved, a value ranking 67<sup>th</sup>. Last year, our country occupied, according to WEF, 78<sup>th</sup>, down one place to 77<sup>th</sup> position occupied last year. The overall score obtained by Romania was 4.07 points on a scale of one to seven, less than a score of 4.08 points in the last year. (see Figure 3)



**Figure 3: Romania GCI vs Romania LPI**

Source : *The Global Competitiveness Report 2012-2013, 2010-2011, 2007-2008*; World Bank, Logistics Performance Index, 2012, 2010, 2007

Consequently, we draw the conclusion that Romania is now better positioned in the logistics rankings. This represents in itself a confirmation of the thesis – supported throughout time by numerous Romanian researchers – of the commercial vocation of our country – geographical position, an open business culture, etc. –, respectively

of the competitive advantages in activities such as services, especially export-import ones.

### 3. Incoterms 2010 vs. 2000

The codified delivery terms – Incoterms – are a very useful tool for all the economic agents that are involved in international commercial transactions. They allow the users to define, with highest precision, the extent to which each of the parties is liable concerning one of the most important parts of the contracts: the delivery. As the literature shows, the proper use – which involves detailed knowledge – of the codified conditions is essential for the physical accomplishment of the foreign trade operations, as well as for the security of the economic agents, either of the exporter or of the importer. (Popa, 2006)

The high importance of the delivery conditions for the international contract, as well as the existence of various practices concerning the delivery, explain the concern for the codification of some rules in this domain, which would serve as a benchmark for the business sector. Starting with 1936, the International Trade Chamber in Paris published a set of rules with international applicability concerning the delivery of goods, named Incoterms 1936 (International Commercial Terms). These rules were revised in 1953, 1967, 1976, 1980, 1990, 2000, the last revision being in 2010 (publication 715)

If the previous modifications were continuous improvements to the code of practices – inside the same international paradigm – taking into account the practical experience of the merchants and the dynamics of the business environment, the last review means, in our opinion, not just a “technical” modification, but also a change in the paradigm: from international to global.

The two versions of the Incoterms present a series of common characteristics, as follows: the delivery conditions offer a precise definition of the obligations of the seller concerning the delivery of goods; of the transfer of the risks from the seller to the buyer, concerning the merchandise; of the division of the expenses between the two parties, during the transportation period; of the documents – or the equivalent electronic messages – owed by the seller to the buyer. *On one hand, even though* it does not regulate the transfer of the property right, Incoterms offers a clear solution for the problem of the transfer of the risks concerning the delivery of the merchandise at international level from the seller to the buyer. *On the other hand,* despite their *optional* character, the parties having the freedom to apply the embedded rules, Incoterms are used on a large scale in international trade. Even though they do not stand for an international law, Incoterms proved to be a highly useful tool in international trade. In the absence of an express reference to Incoterms 2000/Incoterms 2010, the parties may find themselves in front of some serious difficulties of interpretation of the contract in the process of its execution.

Incoterms 2000, like Incoterms 1990, are based on the classification of the rules in four groups – E, F, C, D – organized by the criterion of the increasing obligations of the seller. The rules are mentioned starting from the one which represents the minimum expenses amount for the seller – Ex Works (EXW) – and finishing with the one which implies that the seller would be charged the highest part of the expenses – Delivered Duty Paid (DDP).

Incoterms 2010 brings a series of modifications, among which we mention the followings: the reductions of the number of the delivery conditions: DEQ conditions were replaced by DAT (delivery at terminal), DAF, DES, while DDU conditions were

replaced by DAP (delivery at a denominated place), and the DAF condition was removed (See Table 1).

Another modification brought by the new version Incoterms 2010 consists of a new classification of the delivery conditions: the exclusive maritime delivery conditions (FAS, FOB, CFR, CIF) and the delivery conditions used in any other transportation mode (EXW, FCA, CPT, CIP, DAT, DAP, DDP).

**Table 1: Incoterms 2000 vs. Incoterms 2010**

Incoterms 2000				Incoterms 2010	
E	F	C	D	Omni-Modal	Marine Restrictide
EXW	FCA FAS FOB	CFR CIF CPT CIP	<del>DEQ</del> <del>DES</del> <del>DAF</del> <del>DDU</del> DDP	EXW FCA CPT CIP DAT DAP DDP	FAS FOB CFR CIF

#### 4. Competitiveness and the new Incoterms

A characteristic of the new Incoterms is the fact that – for the first time in the history of the elaboration of this code of commercial practices – the conditions are not exclusively applicable in international transactions, but in internal ones as well. Apparently it would concern the change from international to local (domestic); in fact, the new Incoterms regard a new structuring of the global economy in which the great economic areas have an increasing role. More specifically, Incoterms 2010 are applicable to some extended economic areas, either national (the USA) or regional (the EU), areas which are based on large markets with a unitary regulation (where borders are blurred). In fact these spaces have a dominant share in the global economy.

The statistical data below confirm this affirmation.

The external commercial changes of the EU are about 16% of the total exports and 17% of total imports; in the USA the percentages are 8,1% of total exports and 12,3 of total imports; however, in the case of the EU, the deliveries inside the community weight 62,4% of EU's total imports – the data is for 2011.

This reality implies major changes in the strategy of the firms which activate on the global market: their competitiveness is measured in global terms (not national), competitions is global, not international.

Another radical change concerns the two most known clauses from Incoterms, FOB and CIF. Therefore, we consider that their role is diminished by the inclusion in the category of the clauses that are used for maritime or fluvial transportation. Moreover, in some specific situations – such as transportation in containers – there were included important modifications in defining the clauses.

It is hard to foresee how this change will be perceived in that part of the business world which we call traditionalist (or conservatory, resistant to change). Until now, Incoterms 2010 are – to our knowledge – relatively poorly used as compared to Incoterms 2000. The extent to which they are applied represents a criterion of the evaluation of the way in which business is approached by the companies that

operate on the global market. The option for Incoterms 2010 seems to be the adoption of a global strategy concerning competitiveness. Another implication of the way in which FOB and CIF are defined in 2010 could arise in the domain of international statistics. Nowadays the exports are evaluated FOB and import are evaluated CIF (referring to the cost at frontier of the exporting country and cost, insurance and freight to the importing country). However, it seems that in the new vision the idea of a frontier itself is questioned or redefined in a certain way.

A third major modification brings into discussion the determinant factor of the globalization of the information nowadays, more precisely the electronic support and the internet: the new Incoterms recognizes and establishes the usage of electronic documents. With the formalization of the documents and electronic messages as being in conformity with the demands of the commercial circuit, the problem of the transfer from paper support to electronic support is brought into discussion, both in commercial correspondence and commercial formalities.

The electronic documents can be used if the parties convey so: therefore, the International Trade Chamber recognizes the importance and the reliability of the communication on electronic support in the global trade. The Internet represented one of the major forces of the globalization process; the globalization of business brings the Internet in front of a new challenge.

Last but not least, the new Incoterms bring opportunities to the companies to increase competitiveness through a proper logistic strategy; the extent to which these companies will succeed to integrate in the new trend – as soon as possible – will also be a measurement for their competitive capacity in the new context.

## **Conclusions**

International business will be characterized in the future, to an increasing extent, by a partitioned structure: the players on the global market, with the most chances to value the market potential; the firms with international activity (the classical foreign trade operations) and the companies with local dimensions. The most dynamic sector is previewed to be the one of the global firms.

In what concerns Romanian companies, the new trends mean new opportunities, given the fact that the category of global firms is no longer limited to transnational corporations – as it used to be – but also small and medium enterprises which operate exclusively or mainly on global markets are allowed. In this new plan there is room for the creation and the development of competitive advantages which are based mainly on the speed with which firms react to the change in progress, their adaptability to new conditions and their availability for intercultural communication. These last conditions are important characteristics of the Romanian business approach.

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## EDUCATION AND COMPETITIVENESS IN THE GLOBALIZATION ERA

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**Abstract.** *The educational system is one of the important factors in creating and developing the competitive forces of a country. The higher education provides the socio-economic environment with two basic services: teaching and research. The duality marks an entire history for higher education, but nowadays a new dilemma has emerged: economic efficiency (the university as an economic provider of services) versus academic competitiveness (the university as a research forum). In addition, a new challenge seems to be altering the future of higher education, these stemming from the massive increase in the demand for university teaching services: elite higher education, thus efficient, highly competitive academically (competitiveness), or mass higher education, adapted to the demand, with the primary role of harnessing knowledge through professional training (effectiveness).*

### **Education – a factor of competitiveness?**

Currently, competitiveness is defined in a relative manner, using comparative terms. Thus, an economy is more (or less) competitive than another country on the global market; a system (the educational one) is or is not competitive when compared with similar systems in other countries. This relates to the extent to which an organization / body has a higher performance than others depending on certain criteria.

But competitiveness - as a measure of performance - can also be defined in relation to a community's own project: realistically, i.e. in relation to the resources available and their degree of capitalization, respectively, idealistically, i.e. in relation to the expectations or dreams of that community. An economy/educational system is perceived as more competitive when it has a higher capacity to harness the national, material or spiritual "productive forces".

According to the OECD, competitiveness is "the capacity of companies, industries, regions, nations or supranational bodies, engaged in international competition, to ensure a sustained relatively high income by capitalizing on the factors of production, as well as a higher income by capitalizing on the labor force " (*Bulletin of the EU – Supplement nr.3/1994*, p. 17). The two dimensions are considered equally important, although debates on competitiveness tend to focus on the comparative approach.

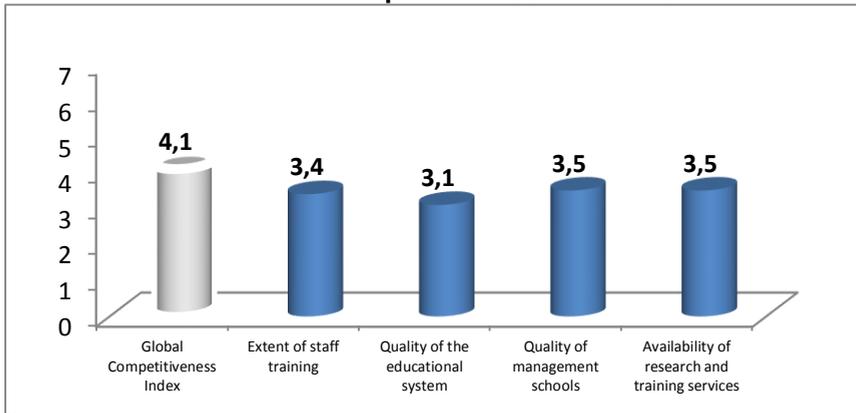
For a while now, The Global Competitiveness Report presents an annual ranking of countries in terms of competitiveness, based on the classification of its determinants

in several "pillars". One of these - the 5<sup>th</sup> Pillar - is *Higher education and training*, which, along with the 6<sup>th</sup> Pillar - *Goods market efficiency*, the 7<sup>th</sup> Pillar - *Labor market efficiency*, the 8<sup>th</sup> Pillar - *Financial Market Development*, the 9<sup>th</sup> Pillar - *Technological readiness* and the 10<sup>th</sup> Pillar - *Market size*, define the economies based on efficiency ( *efficiency-driven economies*).

The statistical data regarding competitiveness ranks Romania on a modest place at the global level and among the last places at the EU level. (See Chart 1)

**Chart 1**

**Romania: competitiveness indicators**

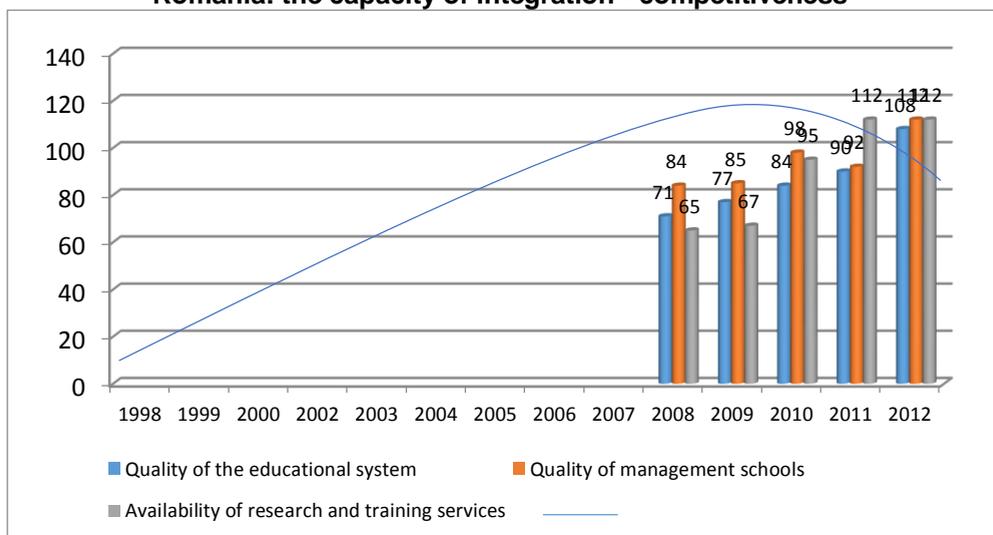


Sursa: *The Global Competitiveness Report 2012-2013*

Moreover, the data from the chart suggests that the educational system is perceived as less efficient (in terms of competitiveness) with respect to the national economy. In other words, the assessment of the business environment -The Voice of the Business Community - namely the opinion of those interviewed, i.e. persons with management positions in businesses, is more inclined towards the negative: the general index of competitiveness of Romania is slightly above the median, whereas the quality of the educational system is at the level of 3.1 (on a progressive scale from 1 to 7) and the management of schools at 3.5.

In a study conducted a few years ago, the conclusion reached was that "international statistics give us a disastrous image of the Romanian educational system, nearly 20 years after the Revolution. At all levels within the educational system – lower secondary, upper secondary and tertiary (higher education)– Romanian students' performances are less than mediocre " (Anton A)

**Chart 2**  
**Romania: the capacity of integration - competitiveness**



Source: *The Global Competitiveness Report 2012-2013, 2011-2012, 2010-2011, 2010-2009, 2008-2009, 2007-2008*; United Nations Educational, Scientific and Cultural Organization; [www.unesco.org](http://www.unesco.org)

On the other hand, the perception of the role of tertiary education in increasing competitiveness is increasingly negative. As presented in Chart 2, the share of those enrolled in higher education from the total population has more than tripled between 1998-2009 (after which a downward trend can be observed), and the competitiveness indicators in this area are getting worse (lower positions in the global hierarchy).

The increase in the number of those enrolled in the system of tertiary education is a general characteristic of former socialist countries. In Romania, the number of higher education organizations has increased from 46 in 1989 to 63 in 1993 and then to 126 in 2000: the number of students enrolled increased from 215.226 in the academic year 1991/1992 to 503.152 in 2000/2001 and continued to increase to 907.353 in 2007/2008 in all forms of education and study modes. Several factors explain this expansion: a) "the decompression effect" - the right to free enterprise earned after the revolution, on the one hand, and the massive demand for higher education services, on the other hand, have contributed to the expansion of the higher education system; b) "the synchronizing effect"- reconnected to the North Atlantic value system, the educational system has experienced an unprecedented diversification, transposed in the increased number of those integrated in the system (students, but also professors); c) "training effect"- which stemmed from the labor market in full expansion mode, in the context of an upward economic trend at the global and regional level. The crisis at the end of the last decade has stopped this expansion, primarily in its quantitative component.

### **Evaluating the educational system of Romania**

"In every country higher education is the moment of truth for the entire society" (Wikipedia, Romanian language edition, Education in Romania). The above

sentence summarizes a current perpetual outlook of the Romanian society: the educational system has more than an operating value (a factor of competitiveness), as it is also a factor in the creation and consolidation of institutions and national consciousness.

Therefore, we are interested in evaluating the higher education system from this perspective, by assessing the degree to which it meets the professional and civic training of the youth, those who will have in the immediate future business responsibilities and will represent "our distinct voice in the context of globalization". If we analyze, from this point of view, recent evaluations, we find that they are polarized in two directions: positive evaluations (from reasonable to very optimistic) and negative evaluations (from reasonable to catastrophic).

In a study conducted in May 2007 (Comsa M; Tufis C; Voicu B, 2007), 70% of the professors interviewed believed that Romanian higher education was as good as that in Western Europe, while only 59% of students agreed with this assessment. When asked "Is Romanian Higher Education at least as good as that in Western Europe?" the following results were obtained: 69% of professors, 58% of students and 50% of the adult population responded positively; when asked the question: "Are the professors of private higher education competent?" the following results were obtained: 58% of professors, 71% of students and 0% the total adult population responded positively.

On the other hand, in another official report (Miclea M, 2009) it is estimated that maintaining the current educational system in Romania is threatening the competitiveness and prosperity of the country. This educational system has four main problems: it is ineffective, irrelevant, unfair and of poor quality.

This latter view seems to be quite widely accepted among intellectuals. In a post found on a blog in 2011 (Diaconescu A, 2011), the author refers to: congenital illnesses (which pertain to the "heavy communist legacy"), chronic diseases (for example, the mismatch between theory and practice) as well as acute and endemic diseases specific to the last 20 years.

On the other hand in a comprehensive approach from the year 2010 (Vlasceanu L., Miroiu A, Paunescu M, Hancean M, 2010) it was considered that *"the overall picture of the qualitative state of our higher education, as it is reflected in the perceptions of universities, students and employers, is that of high quality"*.

A recent assessment of the educational system of Romania, which can be taken as a benchmark, is that of French Ambassador Philippe Gustin, whose initial profession was that of a professor. His Excellency states that Romania is not an underdeveloped country in terms of education. "You have an educational system that is highly efficient, particularly for creating elites; unfortunately this causes the loss of a million students." (school dropout appears to be the biggest problem in education).

Beyond these contrasting evaluations - sometimes taken to the extremes - the conclusion seems to be the same everywhere: the Romanian educational system needs to be reformed.

### **What does "modern university" mean?**

Since ancient times, there are two views on school mission: one that aims to foster the development of human personality, and one that aims at preparing citizens to participate in public affairs. For Plato, the purpose of education is to cultivate the intellect to form personalities able to understand the universal laws, the essence of

life processes and phenomena; in contrast, to Isocrates the purpose of education is the formation of a personality able to participate in solving the problems of society. In other words, an education centered on the man as a cultivated person, on the one hand, and as a member of the society, on the other hand.

However, the development of higher education has not been made through strong options for either of the two orientations - "culture" or "civilization" - but through the specific positioning in the space defined by the two coordinates. University means education, cultivation of the values, formation of human personality. But the university also means education, knowledge transfer and creation of intellectual skills.

Regarding school today, several dimensions should be highlighted.

A first approach is due educator and American researchers Abraham Flexner, sustaining that "modern university is characterized by suitability for specific requirements of each stage of social economic development. University is "an expression of time or" influencing the present and the future of the society.

Another dimension of "modern university" is revealed by the philosopher Jacques Derrida: academic freedom, unconditional freedom to ask questions and make suggestions "search for truth, without any condition, is what defines this condition.

A third feature is revealed by what one author (Ramaley J, 2004) calls the "engaged university" or the society involved in solving the specific problems of that time. The rigor of the research, the quality of the educational product and the organic link with the community to which it belongs and the impact on the quality of life of citizens nationwide and globally are the key success factors of the university of the XXI<sup>st</sup> century.

Finally, another approach (The Boyer Model of Scholarship) assumes that more than ever in history, the university must be involved in the social, economic and ecological environment to which it belongs. It should not only help to increase the dowry of knowledge and intellectual values of the society, but also to solve the specific needs, individual and social, belonging to the environment in which they develop.

### **The reform of the Romanian higher education system**

The history of education in Romania (see Wikipedia) highlights two crucial issues for our education. The first problem is the delay we have in creating high education (Univ. Iasi, 1860, Univ. Bucharest, 1864, Univ. Cluj 1919); in a recent paper (which has given rise to controversy) Paprika Lucian history emphasizes that delaying in the creation and development of institutions is due to persistent cultural and economic gaps between Romania and the western world. (Boia L, 2012) A second problem is the existence of turning points - reforms that marked the development of higher school to us. Spuru Haret Reform 1880;The inter war Reform, basically a consolidation and expansion of the previous reform; drastic changes in the communist experiment (48-49 copying Soviet system; partial liberalization in 1958; 1972 nationalist Stalinist system).

Beyond the performance deficit during that period, caused in large part by the tendency towards islanding (nationalism) and ideology (communism) of the system and consequently of education in general, of the university in particular, one embodiment of the system is generally recognized (and not infrequently evoked by the nostalgic): efficacy, its coverage (literacy etc.) respectively the success with respect to mass education.

After 1990, there were two important events marked by the enactment of a special law: Law Education 1995 Education Law nr.1/2011.

After 1990, the question of the reform was put in terms of the need to raise the quality of education in the context of general restructuring in the post-communist times. The first stage of the reform in education scare was marked by GEO. 75/2005, then enacted by Law no. 87/2006. There were two conceptions of quality at the moment: one in which quality is related to their institutional goals (fitness for purpose), and another where the quality is related to a set of predetermined and universal standards (standardization). Although [8] mentioned in the preamble of the law above mentioned, implicitly, both orientations, the main legislative subsequent provisions frame the Romanian system of quality assurance in the second philosophy.

Translated into terms we use above these guidelines would mean that, the first case it is about effectiveness, and the second about competitiveness. This option can be related to a famous dispute of the interwar period – the one of the followers of "synchronism" and respectively of the protochronism (with its postwar extension); with reference to a problem highlighted from the first period of the synchronization of Romanian culture with western culture – the risk of "forms without substance". A second stage of reform was established by the Law from 2011. This time it is about a determined approach in terms of "competitiveness" in the sense of imposing a model that meets the criteria set out for the universities of the North Atlantic area. This reform has several features. First, a classification of universities into three categories: universities focused on education, universities for education and research, universities for advanced education and research. We are talking therefore about the establishment of a hierarchy – matching the American model – of the higher education institutions, with consequences on the types of study programs that these universities can provide (bachelor, master, doctorate), as well as on the level of funding from the budget. Should follow the "hierarchy of study programs in which there would be involved, as well as in the first stage of classification, independent foreign experts".

Then, a more dynamic approach of ' the change in generations' in higher education, through forced retirement of teachers – elders – who met the criteria (age of retirement, determined by Western model - French) and promotion of the superior teaching positions - youth - which meet the criteria (for promotion ,established by the ministry after the Western model). Finally, imposing as an absolute criterion of professional assessment of the scientific research reflected in articles (ISI) : the article ("creation science") is more important than the book ("mere compilation"). Finally, the university must become 'student centered', 'students are considered "partners" of institutions of higher education and equal members of the academic community. "Basically, "The law provides penalties for universities to their curricula admit more students than capacity approved school", a *numerus clausus* established after the approval of that capacity of schooling.

There is no chance of a temporal perspective, essential to assess the effectiveness of reforms since the project was seriously adjusted by subsequent legislation. We can say, however, that the project was a bitter effort of making more competitive – in the vision of the promoters – the higher education. In fact, in the post-1990 we witnessed the confrontation of two types of reform; one that, starting from the model inherited, is trying to adapt to new conditions – with significant compatibility

adjustments with the European model – and a new American model, imposed by law.

The effectiveness of legislation proved to be relatively low, the educational system in general and the university in particular, facing many changes through decisions that changed or altered the spirit or even the letter of these laws. The perception of education reform is generally negative, while the assessments regarding the capacity of the education system are generally optimistic – a paradox of the current state of education.

## Conclusions

First, a university is not competitive by law (Decree, emergency ordinance, etc.). Through legislation, with lasting effect, the effectiveness of the educational system may be enhanced, as well as its ability to integrate, educate and train young people as intellectual figures (Plato) and active citizens (Isocrates). The competitiveness of the schools depends on the extent to which they enable assertion of the elite system – students and teachers – capable of generating new values within that system and to determine the effects of training on the entire university environment. The affirmation of the elites is an organic process that takes place with the development of the educational system; pre-requisite separation on categories (by circumstantial criteria) can be deeply counterproductive.

Secondly, the Romanian reference model must remain the European type, even if adapted to the dominant trend – the Anglo-Saxon –specific to the globalization process. If the education reform in 1880 aimed at modernizing the Romanian education system in accordance with the requirements of design and development of the national state (the national consciousness, national values), in the XXI<sup>st</sup> century the reform in Romania should aim at the performance of the education in relation with the requirements of the European and global economy.

Third, a modern university means a university corresponding to its time, one which has a history and a future perspective. In other words- and despite what the phrase suggests prima facie – it is fundamentally the university of today, not of tomorrow. The university of tomorrow is just a project for the evolution of the university of today.

## Acknowledgment

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\*\*\*, *Bulletin of the EU* – Supplement nr.3/1994, p. 17

\*\*\*, World Economic Forum, *The Global Competitiveness Report 2012-2013, 2011-2012, 2010-2011, 2010-2009, 2008-2009, 2007-2008*

\*\*\*, United Nations Educational, Scientific and Cultural Organization; [www.unesco.org](http://www.unesco.org)

<http://www.insse.ro/cms/files/pdf/ro/cap8.pdf>

<http://www.ziare.com/scoala/educatie/ambasadorul-frantei-sistemul-educativ-romanesc-extrem-de-performant-care-e-insa-problema-1231729>

## THE HUNGARIAN CRISIS: AN AUSTRIAN SCHOOL EXPLANATION

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**Abstract:** *The Hungarian model was heralded as one of the most successful post-socialist way of integration into the globalised world economy and European economic area in the nineties. Currently, Hungary is suffering from a full-blown crisis 1996 onwards. Increasingly large number of Hungarians is losing their faith in political parties, institutions, democracy and in market economy. The government, elected in 2010 by supermajority and still enjoying a broad support despite the deepening recession, condemns the development path taken after 1989 and openly rejects the wrong model of the last 20 years. The government intends to build a new economic model following a model, which one can call a model of economic nationalism as the only way out of the crisis. The paper intends to portray, through the case of Hungary, how economy and politics is interconnected, and why political elites are choosing a credit fuelled development path. The paper intends to portray how a credit fuelled growth was induced by politics and ended up in tears. Moreover, the paper describes the consequences of pro-etatist shift in the public sentiment due to the alleged “market-failure”, which was in reality a crisis, at first place, created for political purposes by political means. This article, based on the Austrian business cycle theory, argues that the tragedy of Hungary was that it went through a government inspired spending binge in the first half of the 2000s. The deficit spending of the government was accompanied by the expansion of credit by the commercial banks, mostly denominated in Swiss francs. The combined effect of deficit spending and credit expansion was the build-up of debt and loss of cost competitiveness. The 2008 crisis ended the credit fuelled development path and has started the long and painful period of deleveraging crisis. On the other hand, the Hungarian crisis is a post-Keynesian crisis. It had broken out when the state was already heavily indebted and the managerial state fully developed within the constraints of the capabilities of the Hungarian economy. The paper argues that Hungary has chosen the wrong path by opting for economic nationalism and blaming “markets” for the crisis.*

**Keywords:** *macroeconomics, CEEC, economic crisis, Keynesian deficit spending, Austrian economics, Hungary*

**JEL Classification:** *A14*

The Hungarian model was heralded as one of the most successful post-socialist way of integration into the globalised world economy and European economic area in the nineties. Currently, Hungary is suffering from a full-blown crisis 1996 onwards. Increasingly large number of Hungarians is losing their faith in political parties, institutions, democracy and in market economy. The government, elected in 2010 by supermajority and still enjoying a broad support despite the deepening recession, condemns the development path taken after 1989 and openly rejects the wrong model of the last 20 years. The government intends to build a new economic model

following a model, which one can call a model of economic nationalism as the only way out of the crisis.

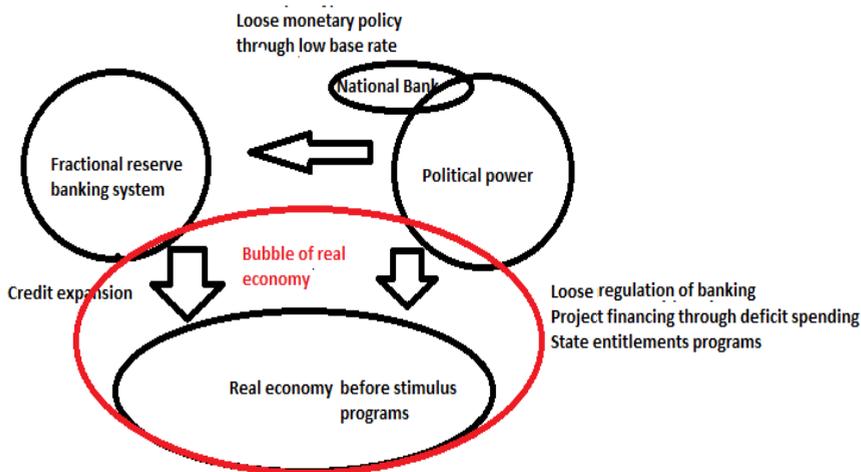
The paper intends to portray, through the case of Hungary, how economy and politics is interconnected, and why political elites are choosing a credit fuelled development path. The paper intends to portray how a credit fuelled growth was induced by politics and ended up in tears. Moreover, the paper describes the consequences of pro-tatist shift in the public sentiment due to the alleged “market-failure”, which was in reality a crisis, at first place, created for political purposes by political means.

This article, based on the Austrian business cycle theory, argues that the tragedy of Hungary was that it went through a government inspired spending binge in the first half of the 2000s. The deficit spending of the government was accompanied by the expansion of credit by the commercial banks, mostly denominated in Swiss francs. The combined effect of deficit spending and credit expansion was the build-up of debt and loss of cost competitiveness. The 2006 Hungarian budget crisis halted the deficit spending, but induced further credit expansion through the banking system. The 2008 worldwide crisis ended the credit fuelled development path and it has started the long and painful period of deleveraging crisis in Hungary. On the other hand, the Hungarian crisis is a post-Keynesian crisis. It had broken out when the state was already heavily indebted and the managerial state fully developed within the constraints of the capabilities of the Hungarian economy. Thus the government had not opportunity to overcome the crisis through deficit spending, following the Keynesian script. The paper argues that Hungary has chosen the wrong path by opting for economic nationalism and blaming “markets” for the crisis. Following the tenets of Austrian economics theory, the paper argues that statist economic nationalism would only deepen the crisis through creation of regime uncertainty and as a consequence of ever increasingly curtailing of freedom of private business through selective regulation, cartelisation and through punitive taxation.

### **The Austrian business cycle theory**

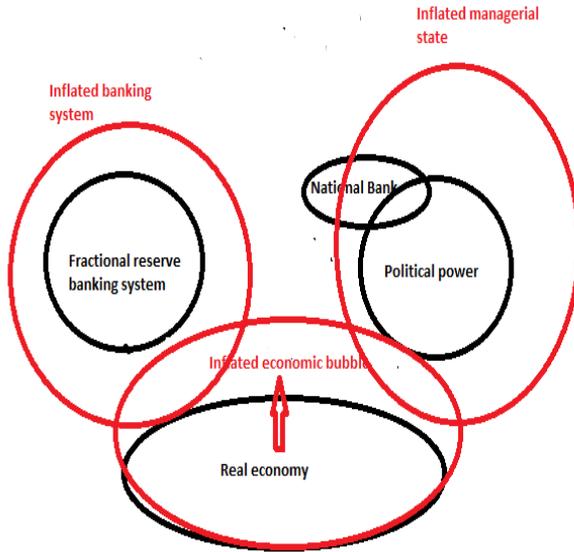
The heart of the austrian business cycle theory, first developed by Mises (1921) is the phenomena of not savings based credit expansion engineered by the state through deficit spending and the fractional reserve banking system, enabled by the loose monetary policy of central bank. The boom is followed by bust, a credit-crunch. Market processes are inevitably ending the boom sooner or later and causing a painful deleveraging process, undoing of malinvestments generated by the artificially generated and unfounded credit boom. This deleveraging process causes a wider political crisis. The cycle of unfounded and unsustainable boom and consequent crisis and deleveraging process is the heart of the Austrian business cycle theory (see more: Ebeling, 1978). According to this theory, the credit boom instigated by the fractional reserve banking system, without previous savings, creates an artificial boom. None the less, the arrival of the managerial state and the base rate policy of national banks creates previously unseen power to induce an expansion of economic booms through deficit spending by the state and the credit expansion by the banking system (see: Figure 1.).

Figure 1:



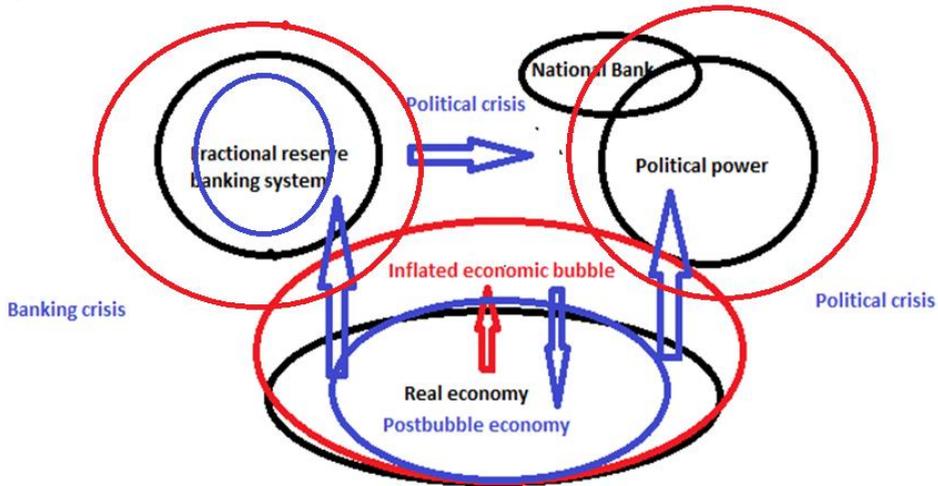
The credit and cheap financing boom distorts the calculations of the entrepreneurs, consumers and the state. Entrepreneurs, due to cheap credit and abundant orders, are overestimating the future trend of volume of capital offered to invest and that of consumption. Consumers are developing falsely optimistic scenario of real wage growth and entering into a spending binge. The boom, leads to malinvestments (Mises, 1949), a cluster of entrepreneurial errors (Rothbard 1962). The state, which initiated the boom through deficit spending and credit expansion, in turn is experiencing a revenue growth. The revenue growth induces further expansion of public investment and entitlement programs, the rise and extension of managerial state (Gottfried 2001). As a consequence, there is a parallel and mutually reinforcing inflationary growth of the real economy - consisted of enterprises and consumers – the fractional reserve banking system and the managerial state is taking place at the expense of debt accumulation and building up of credit pyramids. A kind of Ponzi-scheme style expansion is taking place across the economy, in which growth is based on ever growing credit expansion schemes. The seemingly never ending growth is going ahead causing an ever increasing rise of consumption, until there is not emerging an external obstacle, which would turn the tide. Overconsumption in a finite word inevitably leads to price inflation and/or rises of asset prices. Price increases and/or interest rate rise by the central banks as response to price increases are bursting the bubble (see: Figure 2.).

Figure 2:



Economic actors are facing with the moment of truth: they have mistakenly incurred debt to finance long term projects, which are now turned to be unsustainable due to asymmetric price changes. Entrepreneurs, in turn, are realising that earlier investments are not sustainable, do not produce the expected revenue stream and consumers are unable to meet with credit instalment payments. They immediately draw the conclusion: they should cut back consumption, terminating the half-ready investment projects and cut costs and expenses. The crisis of the real economy begins, which quickly had its impact on the banking system. Credit translates into unsustainable debt. Faltering instalment payments are provoking shortage of bank capital, runs on banks, and may lead to full-swing banking crisis. The collapse of credit further increases the crises of the real economy. Banking crisis feeds the deeper and deeper crisis of the real economy. This leads further to wage cuts, unemployment, the collapse of livelihood and stability of wide sections of the society. Through instability of livelihood, the crisis of the real economy translates into political crisis. The black swan (Taleb 2010) event is becoming reality: the artificial boom based on unfounded credit expansion turns into overall crisis present in the real economy, banking system and in the political system. (see: Figure 3.).

Figure 3:



The Hungarian crisis is a post-Keynesian crisis. It broke out when the state was already heavily indebted and the managerial state had fully developed within the constraints of the capabilities of the Hungarian economy.

### The characteristics of the post-socialist Hungarian model

In the early nineties had formed the three most important feature of the post-socialist Hungarian economy: 1) highly efficient export oriented FDI sector with low level of interconnected local supplier base 2) non-efficient and partly tax-evasion based domestic SME sector serving local markets and in fierce competition with foreign products and service providers, 3) a relatively large welfare state and state bureaucracy.

### Tensions of the Hungarian model

There were three major sources of tensions of the emerging model. First, it have emerged the widespread feeling of fear from insecurity, the sensation of exploitation and anger with the increasing inequality after many decades of relative equality. Secondly, the takeover of flagship firms by multinationals, the low effective tax level on FDI operations. It created a feeling of negative discrimination of domestic entrepreneurs and the sensation of being exploited by foreign companies, by large multinational companies. Thirdly, the benefits of recovery have spread unevenly within the country. Large areas of the country remained depressed, especially, far away from the Western border of Hungary, from highways and rural areas far away from revitalised industrial centres.

The segmented success of Hungary in building a post-socialist economy is increasingly translated into political tensions. There had been formed two major blocks of political parties following the democratic transition. One block was formed by the alliance of left wing MSZP (Hungarian Socialist Party) together with the progressive liberals. The other block was formed around the right wing FIDESZ (Alliance of Young Democrats). MSZP adopted a pro-European third way policy, influenced by Tony Blair, and argued for extensive welfare state combined with open

market economic order. FIDESZ increasingly adopted economic nationalism, claiming that the state should support domestic entrepreneurs and reinforce state participation in the public service sector.

### **The derail of the original model and turn to state led development model based on deficit financing and debt build up**

Around 2000, was the turning point. The FIDESZ led government, elected in 1998, followed a prudent economic policy. None the less, this policy was heavily criticised by MSZP, which demanded “welfare transition”. Facing with loss of popularity, the FIDESZ turned to Keynesian-style state financed economic development policy too boost consumption. In the heated 2002 elections campaign, MSZP outbid the governing FIDESZ by promising wide scale welfare measures. The MSZP has implemented all the headline pledges made in the elections campaign and continued the Keynesian policy of deficit spending.

Joining the EU, in 2004, meant that Hungary should have observed the conditions set by the European Stability Pact (ESP). The government had to introduce various packages to reduce budget deficit 2003 onwards. This policy change, however, led to rapid loss of popularity of the government. In autumn 2004, facing with the possibility of losing elections in 2006, MSZP has opted to change and returned to debt build up to finance the rapid increase of the internal consumption. Commercial banks, to circumvent the restrictive monetary policy of the national bank, had expanded credit employing a scheme based on Swiss franc. The government had not intervened, despite having receiving warnings about the potential negative consequences of building up debt in foreign currency.

### **Crisis and the collapse of the post-socialist development model**

MSZP easily won the 2006 elections. Winning the elections, however, the re-elected government had to meet with the EU demand to introduce severe cuts in budget spending. The sudden U-turn of the government was a bolt from the blue. Things were made worse by leaking out a speech of the Prime Minister in autumn 2006, in which he admitted in a closed meeting, that the government lied during the elections campaign and mislead the electorate to gain re-election. The speech provoked a deep political crisis. The outbreak of the 2008 crisis made things worse. The fall of the Hungarian economy was especially deep as the state continued to cut costs.

In this period, the FIDESZ followed a staunch opposition policy. Opposed any reform, and demanded Keynesian style measures to redress the crisis. FIDESZ promised a strong state, which would support Hungarian entrepreneurs and middle classes instead of unbridled neoliberal policies.

### **The “revolution” of economic nationalism**

The 2010 elections were won by FIDESZ with two-third majority. The supermajority allowed to the government to break free from any constitutional limit and the government put forward a goal of re-organising Hungary. FIDESZ used the supermajority to implement economic nationalism (see Mises 1944) and to assist the strengthening of a loyal entrepreneurial class through covert and explicit cartelisation of certain sectors of the economy. The stated goal of the government is to create a new and more indigenous growth model based on strong government after the alleged the failure of the globalised and FDI dominated post-transition societal model, which only served to exploit the Hungarian nation by foreign companies and

speculators, especially in public services, banking and retail trade sector. This strategy required selective legislation at the expense of neutral concept of rule of law.

There were, however two constraints on the government. In one hand, given the lack of competitive domestic industrial base, the government is forced to support the presence of manufacturing FDI and limit economic nationalism to service sectors. Secondly, EU insisted to maintain budget deficit at 3% for 2011 and at 2.5% for 2012, and thus effectively blocked the initial plans of FIDESZ to finance through deficit spending the re-engineering plans. To circumvent financial limits set by the Commission, the government acquired the accumulated wealth of private pension funds. The ending the private pillar of pension system also had the beneficial effect that it had lessened the annual deficit of the budget by 1-1.5% of the GDP, easing the meeting with the strict conditions set by the Commission. Additionally, the government levied special taxes on a number service sectors, mostly dominated by large multinational firms, to increase her revenue. It is rumoured widely in the financial press that the special taxes are also serving to implicit putting pressure on these companies to leave Hungary and hand over their markets to domestic companies.

The results of three years of re-engineering are mixed. Politically, economic nationalism is a winning ticket. The government has retained a relatively huge support despite the recession. Economic nationalism proved to be a successful strategy when large segments of the population lost their hope in the globalised market economy, and put the blame on foreign speculators and banks for the crisis. A large section of the population hopes to come out from the crisis by ending the exploitation by foreign companies.

None the less, the economic results are increasingly contradicting to these hopes. The Hungarian economy 2011 onwards fell into recession. Investment has fallen to a very low level. It is widely argued that regime uncertainty (Higgs 1997) is the major reason for the low investment level caused by cartelisation in certain sectors, legal uncertainty created by ever changing and selective regulation, fear of seizure of wealth through punitive taxation. Hungary is increasingly becoming an outlier in the region, caused by inward looking policies and ever deepening recession. Economic nationalism is increasingly at odds with the European regulation ensuring the operation of the European single market.

### **Discussion: Austrian economic cycle theory and its interrelationship with politics**

The paper through the example of Hungary showed how develops an unsustainable, credit fuelled economic model mediated through party competition for power in a democratic system. Winning in the next elections is an unquestioned priority for political parties. For governing parties one of the major arguments for re-elections is economic growth. Thus governments do their best to engineer growth with "good" government policies and redistribute the dividends of growth for those layers of the society, which deemed to be important for the re-election for the governing parties. It was the reckless attitude of the major political parties to secure political power for themselves is the major culprit for the excessive debt build up for the state and for allowing the banking system to offer forex based credit for consumers and companies. Six years of party resulted in a long agonising recessionary period. During the long recession, the MSZP led government was unable to unleash

Keynesian anti-cyclical deficit spending due to the high government debt level and had to implement austerity measures, which deepened the recession.

The impact of debt crisis and the long crisis, however, had undermined popular trust in markets, which was anyway low given the low trust nature of the Hungarian economy (Bartha 2012). The FIDESZ ably exploited the wishes of the population for a quick fix and made to believe that a strong government could overcome the crisis and ensure security. Winning the 2010 elections, FIDESZ implemented the policy of economic nationalism, and pursued a blame game against banks and foreign investors. Blame game and feeding the hope for development through profit-repatriation from foreign actors is provided an opportunity for the government to legitimise crumbling down of rule of law to be able to legislate special punitive taxes and renationalisation in selected public service sectors. Punitive taxes afforded new sources of revenue for the government. Another source of additional government revenue came from acquiring the private pension funds by the government through punitive legislation. With these measures, the government was able to upkeep the active managerial state providing justice and offering paternalistic protection. Unfortunately, for the long term prospect of Hungary, economic nationalism and the crumbling down of rule of law, which is a necessary consequence of omnipotent government, regime uncertainty is undermining business confidence and reducing long term growth potential of the country. Increasing isolation, ever deepening recession is the price for economic nationalism. None the less, a selectively punitive high tax regime, the ever increasing fear of arbitrary state intervention may just works against the hopes of average Hungarians, that state could reignite growth.

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## THE END OF IMF – TURKEY RELATIONSHIP

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**Abstract:** IMF has been created to make international cooperation on financial matters stronger and for solving the problems of balance of payment. However, the IMF formed policies in order to solve problems of balance of payment till the 1980s, expanded its effectiveness much more by controlling the structural adjustment programs after the 1980s, and undertook the role as an international lender of last resort on crises caused by globalization trends. In developing nations, foreign and domestic deficit occurred due to infrastructural causes that have created economic instabilities portrayed through inflation and unemployment. Especially foreign debt problems sourced by the foreign trade deficit transformed into an economic crisis for these countries. Many countries affected by such economic crisis applied to IMF and its Stabilization Program with the aim of providing economic stability in the hopes of recovering. The important thing here to point out is that the economic programs used by countries during their economic crisis are supported by the IMF in reality. In this situation Mexico and Argentina can be given as a good example. IMF has undertaken the same mission in Turkey with seven stabilization programs put in practice and nineteen Stand-By Arrangements between them. But IMF has failed many times in Turkey just like in many developing countries. This is because IMF did not take into consideration economic and social structure of countries in stabilization programs put in practice. Today, Turkey has reached to an important point from the way of its relationship with IMF; more clearly, Turkey is determined to achieve its future without IMF. Turkey-IMF relationship in the framework of stand-by agreements in the past half century of our economic and political history has come to an ending point. After a period of 51 years of intense relations, Turkey decided to determine its calculations of credit limit by the way of advantages and disadvantages and continue its relations in this way. In this context, this study will try to prove therotically that Turkey will put in place to foreign credit support with the purposes of carrying out stabilized policies and protecting itself from financial shocks. Finally, Turkey will contact IMF with requirements of the rules and regulations that are in its advantage.

**Keywords:** IMF; Stabilization Program; Stand-By Arrangements; Turkey.

**Jel Classification:** E02, F55.

## **1. Introduction**

Realizing economic development and its continuity is difficult, but is a requirement for a country. The basic problem faced by many countries who are trying to establish economic development is domestic and foreign instability. Economic stability is defined by the balance of both domestic stability; such as full employment, equilibrium level of income and price stability and also by foreign stability; such as balance of payments stability. In a country that hasn't realized economic stability, negativness in each and also economic crisis can be seen as sosyo-economic problem such as inflation, deflation, stagflation, poverty, inbalance of income distribution. For that reason, the most important task is to provide economic stability and to insure sustainability by economically developed and developing countries.

Developing countries generally need foreign support to overcome economic crisis sourced by domestic and foreign imbalance. One of the international organizations that support countries like these are International Money Fund (IMF) and World Bank (WB). IMF takes a role by strengthening balance sheet, providing price stability and macro-economic performance, applying financial sector policy and granting credit for needer countries. WB is generally interested in long-term development and policies in reducing poverty.

Countries that want to provide economic stabilization have applied monetary and fiscal policy for domestic economic stabilization and foreign trade policy for liberization in foreign trade with the guideness of IMF-supported Stabilization Program

In this study, the last IMF-supported Stabilization Program in Turkey will be examined after mentioning the role and importance of IMF in the world and then will determine the last perspectives of Turkey-IMF relationship.

## **2. IMF Stabilization Programs and the Role of IMF in World Economy**

### **2.1. IMF Stabilization Programs**

In developing countries, foreign and domestic deficits are caused by structural reasons, manifesting itself in the form of inflation and unemployment, leading to sustained economic instability. Foreign trade deficits of these countries, especially with the heavy foreign debt problems, transforming the conditions of instability and crisis stabilization policies are implemented (Çelebi, 1998). GDP, employment and large balance of payments fluctuations in the level of prices in order to minimize the stabilization policies is considered by countries as a solution to economic imbalances. These elements according to their facilities can be divided into five groups, financial, monetary, external, control and enterprise.

In order to achieve the desired purpose of the application of stabilization policy, the country's political, economic and social elements being taken into account all or some of the above-mentioned instruments must be used according to the different priorities and measures. Brought into line with the country's stabilization policy instruments based on the structural characteristics of an effective, efficient and appropriate solutions will be higher than the probability of making an undeniable fact. Aims to correct imbalances in the financial and the real sector of the economy, stabilization programs in developing countries are often implemented for many years. The main causes of countries implementing radical stabilization programs are accelerating inflation, balance of payment bottlenecks; the serious imbalances in the financial markets and the real sector (Bahçeci, 1997). In other words, the main

purpose of the economy of goods, capital and foreign exchange markets is to provide equilibrium prices. Stabilization programs, which are the application of stabilization policies in a country, are used to combat the current economic instability.

Stability and/or structural alignment programs are called in general a lasting improvement in the balance of payments and foreign inflation decreasing in velocity, or both, as the composition prepared in order to achieve the overall macro-economic targets as economic measures defined in the package. External financial support to developing countries to implement IMF-type stabilization policies (programs) are based on Monetarist thinking, orthodox stabilization programs (Bayraktutan & Özkaya, 2002; Boockman & Dreher, 2003). IMF-type stabilization programs can be based on three key elements. The first is a short-term policy implementation to address balance of payments disequilibrium; secondly, the effectiveness and providing growth to the mechanism of the free market, and the creation of the necessary arrangements for it; thirdly, it's able to ensure that countries that get financial support from the IMF guarantee their ability to pay its foreign debts (Zaki, 2001). In addition to these qualities the IMF, the WB and the U.S. Treasury created the "Washington Consensus," and after obtained measures in accordance with the basic ideas of IMF-type stabilization program created a package of measures that have been applied in all countries particularly in Turkey.

Today, the IMF's proposed stabilization programs is expected to bring under control the problems of inflation and the foreign deficit in the short term due to tight fiscal and monetary policy and devaluation. In medium and long-term supply-side policy instruments, an increase in the production and use of resources more efficiently, and making infrastructure investments, property and the opening up of the economy through liberalization of capital movements and a broad privatization will be provided by going along with the growth of free market economy by strengthening the economic instability has been suggested to permanently resolve economic instability (Çelebi, 1998; Joyce, 2012).

## **2.2. The Role and Importance of IMF in World Economy**

After 1980, many developing countries have made free capital accounts. Thus, financial liberalization is experienced all over the world, and the ability and speed of movement of international capital be increased. In the 1990s, advances in the field of communications, access to information, along with facilitating the phenomenon of globalization has increased the interdependence of the world's financial markets. Addition to financial integration, this kind of communication and the emergence of new financial instruments and transactions, and has widespread the international credit system. The process of international expansion of the credit system as well as an increase of speculative capital movements have occurred balloons that could cause booms in financial markets. Since the early 1990s as a result of all these developments, speculative capital movements directed by countries, in spite of their shortcomings of infrastructure have made quick financial liberalization are developing countries and have suffered severe crises in the fields of finance and banking. Balance of payments crises arising from the same period has been intertwined with the financial crisis. In order to get rid of the economic crisis, many countries turned to the IMF and to its stabilization programs to ensure economic stability. An important point to note, that many economic crises is that the programs implemented at the beginning of the crisis are IMF-supported programs. However, Mexico and Argentina are good examples. According to a study by Hutchison and

Noy covering the years 1952-1999 country groups that implemented IMF-supported stabilization programs are shown in Table 1 below.

**Table 1: Approved Programs (1952-1999)**

	<b>Short-Run SBA</b>	<b>Long-Run SBA</b>	<b>SBA Per Country</b>
<b>Latin America</b>	284	11	11,7
<b>Asia</b>	101	13	6,8
<b>Middle-East</b>	33	00	5,3
<b>Africa</b>	229	72	7,2
<b>Others</b>	113	04	3,2
<b>Total</b>	<b>760</b>	<b>100</b>	<b>6,8</b>

Source: Hutchison, M.M. & Noy, I. (2003) "Macroeconomic effects of IMF-sponsored programs in Latin America: output costs, program recidivism and the vicious cycle of failed stabilizations. *Journal of International Money and Finance*", (22), p.p. 991,1014.

Table 1 above shows the approved and implemented stabilization programs by IMF most are in Latin American countries (11.7 per country program), while the Asian Region countries were ranked third (6.8 per country program).

**Table 2: Stand-By Arrangements (2000-2011)**

<b>Years</b>	<b>SBA</b>	<b>Years</b>	<b>SBA</b>
1999	5	2006	5
2000	11	2007	3
2001	11	2008	8
2002	9	2009	13
2003	10	2010	5
2004	5	2011	14
2005	6	2012	5*

Source: IMF. (2013) "Annual Report / 2011 and 2012", [Online], Available: <http://www.imf.org/external/pubs/ft/ar/index.htm> [22.03.2013]. \* Until April-2012.

However, stand-by arrangements with IMF have decreased seriously in the world since the 2000s, as seen from Table 2. Member countries realized only about 110 stand-by arrangements from 1999 to the end of 2011 (with the estimated numbers of April, 2012). Especially, in 2007, there were only 3 stand-by arrangements between IMF and member countries in the entire world. But, the number of stand-by arrangements began to increase with the 2008 global economic crisis and after that reached to 14 arrangements in 2009.

### **3. Turkey – IMF Relationship**

#### **3.1. IMF History for Turkey**

Turkey has been a member of IMF since 1947. This membership for Turkey was the first step of an open economy with the aim of preventing foreign deficit and increasing direct foreign investment (Boratav, 2003). So Turkey's economic and political

relationship with other countries began by joining international organization after 1946. In this context, Turkey that wished to have closer economic and political relationship with Western Countries realized it with its membership to IMF and World Bank with the law number 5016 on the 19<sup>th</sup> of February 1947 (Karluk, 2002).

**Table 3: Stand-By Arrangements of Turkey**

SBA - Date	Duration (Month)	Canceling Date	Amount (million SDR)	Letter of Intend (Signing Date)
04.08.1958			25.0	14.07.1958
01.01.1961	12		37.5	25.11.1960
30.03.1962	9		31.0	23.01.1962
15.02.1963	11		21.5	20.12.1962
15.02.1964	11		21.5	06.11.1963
01.02.1965	12		21.5	21.11.1964
01.02.1966	12		21.5	20.11.1965
15.02.1967	11		27.0	18.11.1966
01.04.1968	9		27.0	25.01.1968
01.07.1969	12		27.0	22.05.1969
17.08.1970	12		90.0	31.07.1970
24.04.1978	24	1979	300.0	23.07.1978
19.07.1979	12	1980	250.0	30.06.1979
18.06.1980	36		1.250.0	02.06.1980
24.06.1983	12		225.0	18.05.1983
04.04.1984	12	1984	225.0	12.03.1984
08.07.1994	14	1996	610.5	27.05.1994
01.01.2000	36	2001	15.038.4	09.12.1999
04.02.2002	33		12.821.2	18.01.2002
01.05.2005	36		6.662.0	26.04.2005

Source: Mahfi Eğilmez, "IMF ve Türkiye", *Radikal Gazetesi (Newspaper)*, 19<sup>th</sup> of May, 2005.

It will be appropriate to tackle Turkey – IMF relationship in two different time periods as official participation and actual participation. Turkey has a 66 year history with IMF according to the date of membership; but actually has a relationship of 61 years with the signature of the first Stand-By Agreement on the 4<sup>th</sup> of August in 1958.

According to IMF Principal Agreement, member countries are represented by treasury secretary (IMF articles et al. 1993). Fiscal agent in Turkish Undersecretariat of Treasury represent Turkey in IMF. By the way, Turkish Lira Accounts belongs to IMF and has kept in the Central Bank of Turkish Republic as a responsible entity of money in Turkey. Also the Secretariat of Treasury represents Turkey as a "Governor" and the President of Central Bank represents Turkey as a "Vice-Governor" in the board of governors of the bank in the IMF.

Turkey gained 8<sup>th</sup> article status (status for countries which liberate capital movements) by promulgating the protection of the value of Turkish Currency Law in 1989. Status changing of Turkey was declared to the entire world by IMF on the 3<sup>rd</sup> of April in 1990 (Eğilmez & Kumcu, 2001).

As a result of 11th Quota Increasing Discussion completed in 1998, quota of Turkey was increased to 964 million SDR. The sum of fixed and variable votes of this quota is 9.890 (0.45% of all votes) in terms of voting power at IMF Executive Board in March, 2004.

Turkey implemented 19 Stand-By Arrangements with IMF after 1958 with the aim of having economic stabilization again. Turkey used some opportunities of IMF such as “Stand-By Arrangements,” “Consolidated Fund Facility” and “Additional Reserve Facility” within the framework of these arrangements. There were 7 comprehensive stabilization programs among these 19 Stand-By Arrangements in the past 55 years. All these arrangements with IMF are shown in Table 3 and as it can be seen from this table, Turkey has a close relationship with IMF in those years. So, the last program with IMF called the “Program for Transition to A Strong Economy (PTSE)” must be examined for evaluating the past and the future of Turkey-IMF relationship.

### **3.2. The Program for Transition to a Strong Economy**

The main purpose of PTSE formed by two-stages on 14th of April and on 15th of May in 2001 was to remove the confidence crisis caused by exchange rate regime and to create an infrastructure for restructuring of the economy and public administration. Also there were some macro economic goals of PTSE. These goals have been itemized in the letter of intent on 3rd of May in 2001 (Central Bank of Turkish Republic et al., 2002; Undersecretariat of Treasury et al., 2003):

- GDP will contract by 3% in 2001 and GNP will achieve growth by 5% in 2002
- The rate of CPI (Consumer Price Index) will be targeted to be 52% annually based on devaluation of TL (Turkish Lira)
- External current account will be in balance in 2001 and 2002 as a result of increased competition of Turkish products and downsizing in economic activity.

\$6.3 billion was demanded from IMF with the letter of intent dated on May 3<sup>rd</sup> 2001 after taking these measures. In 2002, Turkey demanded a new stand-by arrangement from IMF with the letter of intent dated on 18<sup>th</sup> of January 2002 to support economic stabilization program between 2002 and 2004. Strategy for the period 2002-2004 was prepared in the following format; In accordance with necessity for balance of payments and strengthened policies, approval of a new SBA including January, 2002 and December, 2004 with total 12,821.8 million SDR was demanded by Turkey. This program aims to guarantee the economy against future crisis and to create a non-inflationary and a sustainable growth (Undersecretariat of Treasury et al., 2002). Financial support provided from IMF by granting this letter of intent signed as a SBA on 4<sup>th</sup> of February in 2002. The measures in SBA are as follows:

- Implementing monetary policy to reduce until 35% and targeting 3% growth in the monetary base,
- To continue to apply the floating exchange rate regime that is the basic element for reducing inflation in monetary policy,
- Taking some measures for developing and deepening currency market and for expanding derivatives markets,
- Corresponding the financial goals with 6.5% of GNP in 2002,
- Taking new measures with the aim of supporting determined fiscal target for cutting spending and increasing income that is approximately 2% of GNP.

The decisiveness of implementation of economic program, adherence to fiscal discipline, continuation of structural reforms, the New Turkish Liras (YTL) being at a strong level and declines in interest rates has played a very important role in helping to continue the economic stability in 2005 just like the last three years. This steadiness reflected to the economic indicators and the number of individuals employed has reached 22 million people, growth rate in GNP grew to 7.6%, rising rate of Consumer Price Index (CPI) reduced to 7.7% and rising rate of Producer Price Index (PPI) declined to 2.7% and by remaining below expectations. As a result of this positive trend, Turkey's relations with IMF didn't halt in that period and Turkish Government re-signed a three-year 'Staff Monitoring Agreement' in May 2005.

The measures taken place within the scope of SBA signed in May 2005 are as follows:

- To continue the control of monetary aggregates and to get the amount of 6,662.04 million SDR of funds to be used in 12 equal slices on the basis of the balance of payments and financial framework,

- To increase resilience of economy to external shocks and to strengthen international reserve position for ending the usage of IMF resources (Undersecretariat of Treasury et al., 2005).

- To reduce the ratio of net public debt to GNP until 10 points by the end of the program.

- To keep under control the current account deficit by applying tight fiscal policies and to discover the resources needed for investment and growth.

However, with all these positive developments, Turkey was unable to cope with the current account deficit. TCMB, in 2005 intervened through direct purchases six times due to excessive exchange rate fluctuations in the foreign exchange market and the need for these interventions, as well as requirements of the current account deficit compared to the previous year, representing an increase of nearly 50%, increased to \$23 billion. In the face of such a situation programs implemented by the IMF for debiting an assumption that is formed, and as of May 2005 not to continue with the IMF, or at least that the termination of relations with the IMF in May 2008 there has been a large increase in discourse.

Such rhetoric of support in 2006 show a significant increase in the current account deficit increased to US\$32.5 billion at the end of the year and reached a level approaching 6% of the GDP. However, in 2006 like the other three-year period was a year where expected targets were not reached not only in terms of the current account deficit but also in terms of inflation rates. CPI inflation was 9.65% at the end of 2006, 11.6% in PPI inflation was realized, and by the end of the year, this rate is expected to remain well above the level of the upper limit of the uncertainty band. One can say that changes in the price of crude oil, processed food and gold all play a role in the rise of inflation. These negative factors experienced in 2006, as well as the unemployment rate, which was 10.3% in 2005 and declined to 9.9% as a thriving indicator. In general, Turkey's economy, through the period of 2002-2005 drew up a table far away from the rapid growth days; Turkey, within the framework of the IMF membership, as of December 31, 2006 quota, increased to SDR 1191.3 million with the conjunction of SDR 227.3 million on November 1, 2006, in a more blunt sense, the relationship with the IMF will be reflected in changes in the expression levels of macro-economic indicators achieved.

We have to consider that, during the first six months of 2007 compared to the same period last year, current account deficit has increased only 1.6% with the number of

\$23,5 billion (Ministry of Finance et al., 2007). Although, GNP increased slower compared to the last year (15%) by reaching \$277 billion; but also unemployment rate did not change (8.8%) and employment due to the rising in population surpassed over 23.5 million people. While these developments create a hopeful seen in Turkey, a global economic crisis broke out the world in 2008. However, despite the global crisis, Turkey did not sign the 20<sup>th</sup> Agreements with IMF as expected and continued to pay its debt. Turkey achieved to push back its debt to \$2.3 billion in March 2012 and \$400 million in the same period of 2013 compared to the end of 2002 with the number of \$23.5 billion. In fact, the government declared that it would pay back the entire amount of debt to IMF in April 2012, however interest rates were so low that the planned closure of the debt was decided to end in May 2013.

#### **4. Conclusion**

Countries, particularly in developing countries such as Turkey, which is in a deep economic crisis are in need of external support in order to ensure new economic stability. The IMF is one of the most important institutions that provide this type of external support. Turkey, to restabilize its deteriorated economic stability has implemented a total of seven IMF-Supported Stabilization Program since 1958. As discussed in periods of economic instability and the main objectives introduced for the elimination of both internal and external imbalances, was the practices of the stability programs, and the expected results could not be obtained.

IMF-type stabilization programs, which include elements of Heterodox and orthodox, when applied to countries to prevent a crisis or to get rid of the crisis, economic stability literally cannot be seen in these countries. The main criticism against the IMF in this regard is that the IMF does not look at the characteristics of the countries that have entered into a crisis, and proposes stabilization programs to each country has if they all have the same qualities. Turkey has had many bad experiences with the IMF-Supported Stabilization Programmes and one of the main causes of instability in the IMF programs is that it moves into action without looking at the realities of the country where the application of these new policies are proposed. However, the greatest criticism of the IMF after the 1995 crisis, is that instead of recovering the country of out the crisis, as an international lender it created a country on its way to fulfilling its debt obligations to banks and financial institutions.

With this widespread "bleeding" in Turkey, it forced people to think that it was time to terminate relations with the IMF. Pressure created by these ideas, thought of the "Staff Monitoring Agreement" which was created prior to the end of May 2008, in relation to negotiations with the IMF; the government had no opinion about what will happen with the future of our relations with the IMF, and when it came time for the government to make decisions it gave implicit explanations and tried to gloss over the issue. In fact, Turkey, with a new stand-by arrangement with the IMF set to continue for three years, and by itself can provide the ease of borrowing from the IMF. Because the last Strong Economy Transition Program revealed that economic stability is available in the country and proved to be the best out of the 19 stand-by agreements. Moreover, the IMF is willing to sit down at the table with Turkey. The reason for this, the IMF wants to catch a success with Turkey. However, Turkey knows all too well that in order to catch any more success it has to decline seating with the IMF and 20 agreements were planned in 2008, and Turkey did not sit at the

table. Indeed, Turkey decided to continue to pay its debts and by the year 2013, it proved to the world by show how much of a right choice it had taken.

Turkey - IMF relations in the framework of "stand-by" agreements have marked the last half-century of both the economic and political history has now come to an ending point. In its 51 year history Turkey signed 19 stand-by agreements, used \$46 billion 617 million dollars credit and with the interest paid a total of \$54 billion, 390 million.

As a result, Turkey is now determining the future of relations with the IMF, and is not planning to calculate the method of credit limits to be obtained. Correctly apply policies to stabilize the economy and to implement policies that are believed to be correct in order to protect from outside economic shocks; external credit support organizations such as the IMF will be engaged under conditions that are in favor of Turkey and in accordance with his own will.

Turkey having its current macroeconomic freedom is looking forward to developing its international trade area and it most likely will continue its relations with the IMF in a different form; not as a borrower but as a lender. It will give policy advise to the IMF rather than take advise. Turkey will be shown as an example by the IMF in terms of policies that helped development and recover Turkey's economy.

Turkey is one success case for the IMF but is it possible to repeat such a success? Are the policies of the IMF that were applied in Turkey applicable in other countries? Can the same results be achieved? The IMF will continue to monitor the successes and failures of its policies in Turkey very closely.

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***SUB-SECTION: EU SUSTAINABLE ECONOMIC DEVELOPMENT AND  
COMPETITIVENESS***



## THE SUSTAINABLE DEVELOPMENT STRATEGY OF BAIA MARE CITY

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**Abstract:** *The paper presents a series of subsequent tools that provide the support for the complex tools regarding the important aspects of local and territorial development, such as strategic planning, sustainable development strategies, integrated development plans. The reference point of this research is represented by the management process in the public administration in the city of Baia Mare for which there are, in the general economy of the paper, the most complex resources for an empirical research. The Baia Mare Urban System presented in this paper has all the characteristics of a model structure of polycentric development that has elaborated/formulated a development overview on long and medium- term with all the strategic, tactical and operational elements that support the development within a well defined territory. The approach on both components (institutional, territorial) has a complex character but at the same time, a unitary one. The promotion of polycentric and balanced territorial development as an essential element for the territorial cohesion realization represents one of the priorities of Europe Strategy 2020. In this context, the formation and consolidation of the development poles as basic elements for the creation of polycentric networks must be supported by integrated politics at local and regional level. The study cases outlined in the paper represent models for the use of different public management tools in concrete situations that cover most of the fields approached in local administration.*

**Keywords:** *sustainable development, Europe Strategy, urban system*

**JEL classification:** *J11, R11, R23.*

### **1. Introduction**

The approach of the European Union has evolved from the social dimension to the competitive one (Lisbon Agenda, Leipzig Carta, European Territorial Agenda) thinking at a larger scale (metropolitan scale, growth poles). Following this, the present article wishes to provide a practical framework which can be used to better understand the need of an efficient urban system and, also, to create an urban system based on competitiveness and innovation.

Allocated to each strategic objective, according to the locally established strategic planning, policies of sustaining the promotion of public programs have been defined, concerning development in urban, over or suburban context in Baia Mare city.

The territorial adjustments in the field of economy and housing, the conservation and the promotion of natural values, the development of the basic public infrastructure are some of the major fields of interest.

A number of issues defining the urban system management Baia Mare emerged from the diagnosis analysis carried out. This set of problems will lead us, as a next step, to formulate strategic objectives and policies, programs and development projects, respectively:

- the peripheral position in relation to the major transportation corridors;
- the effect of economic restructuring;
- the existence of regional disparities;
- the existence of environmental issues;
- the damaged built heritage;
- the complexity of public management.

Considering the elements that are part of the vision of development, the strategic objectives for which the Baia Mare Urban System Association has been created are: improving the quality of life and removing the existing disparities between localities, creating a pole of economic concentration and support for attracting investment and for further development of jobs in this area. 18 policies have been established in order to implement the development strategy of the Baia Mare Urban System, accompanied by a series of measures and concrete projects which are necessary for its implementation.

## **2. The implementation of a Strategy for Local Sustainable Development**

Starting from the assumption that there exist administrative-territorial entities, respectively the commune/ the town/ the municipality, a first instrument of strategic management was identified through the drawing and the implementation of a Strategy for Local Sustainable Development. The case study taken into account is the local Agenda 21 and all the data and the specific measurement instruments used in this case study were collected through the systematic analysis and evaluation of the economic development in the Baia Mare urban and suburban area.

The sustainable development of the Baia Mare municipality through Agenda 21, which contains the elements of both a development strategy and of a transformation strategy, is characteristic of a pro-active community development. One crucial element which led to its elaboration is represented by the existence of a well-developed community, with a positive potential of human resources, within the context of a radical change in the fields of activity in the local economic sector.

The necessary equilibrium for implementing such a strategy is sustained through the achievement of an efficient communication with the local community in order to directly involve it in the process of decision making and the promoting of measures necessary for implementation, as well as through the over-development of the tactical level, able to sustain the reaching of medium and long-term goals within strong social and economic transformations.

The way of integrating the local strategic objectives at a county and regional level has been realized through the promoting of an ascendant strategic construction ("bottom up"), the elements of the local strategy being the basis for the construction of strategies at county and regional levels.

Steadily promoting the objectives and measures established by Agenda 21, both at a formal and an informal level, Baia Mare has succeeded to make known and to

render assimilated at county and regional levels through the specific strategic documents all the elements of the local sustainable development strategy, thus influencing the county and regional concepts of development.

Implementing the strategy represents the practical stage of planning and monitoring the process of putting into practice the decisions expressed in development programmes and projects. This must ensure the reaching of the strategic goals that have been stipulated, through the implementation of projects at the community level (Applen, 2002; Benson *et al.*, 2004).

The Sustainable development strategy represents a strong political pledge on the vision about the future of the community and at the same time a platform for the coordination of integrated actions from the urban agenda assumed by the collectivity. The strategy answers the challenges with which communities are faced on a global scale: financial crisis, competitiveness and globalization, a decrease in population and the demographic aging, migrations, climatic changes and the management of energy resources, to which are added, at an internal level, the process of decentralization in the education and health systems (Choo & Bontis, 2002).

Through the experiences encountered by the municipality of Baia Mare during this implementing period, the perspective of a supra-urban level depending on the global agglomeration that had created it was identified, the necessity of development being in this respect approached from a territorial point of view. The modification in the ratio of resources between the dense urban zone and the adjacent rural zones is analysed according to the common values and objectives they sustain.

To this purpose the concept of poly-centric regional development has been analysed and developed, the great urban centers having a polarizing role for the adjacent influence zone. The Metropolitan Development Strategies represent the third instrument of strategic public management dealt with within this paper. The case study and the functional links between the urban pole and the influence zone have been developed and analysed in the case of the Baia Mare Urban System.

This poly-functional territory has been analysed both from the perspective of defining the administrative limits and from the point of view of the social, economic and environmental development potential. The defining of a metropolitan-type strategy, as well as of some afferent measure plans needs an institutional and financial construction in order to efficiently complete the territorial dimension.

The approach of the Sustainable Development Strategy of Baia Mare city has as its foundation the global and European experience in the domain of strategic territorial planning, within the context of promoting

The territorial development knows a new approach within which the social, economic and territorial dimensions are treated in an integrated manner in the context of the sustainable development. The decisions regarding measures for development are made under multiple pressures, and the phenomena that manifest themselves locally have an ever-growing territorial dynamics.

Romania's development is based on a powerful system of major development poles connected to the complemented system of support specialized poles by a good partnership relation between the different levels in view to ensure the socio-economic and territorial cohesion, the sustainable development.

In this context it is necessary to consolidate a coherent network of development centres which is to act as development engines, and also as an equilibrium structure at the regional level in Romania.

The Urban System Baia Mare is a functional example of territorial structure which has drawn a development strategy where there have been underlined the key-aspects of management, the strategic objectives, the policies and the development measures.

The instruments used have mainly been those promoted by the local public administration, these having the role of offering consistency to the private and public policies at the level of local or regional communities. The decisive role of public management in the near future is to build the “frame” for the social and economic development of a well defined space.

This space must tackle with both the values of local identity (cultural, economic, social or natural environment), and the major challenges linked to globalization-related phenomena, the ever-changing world economy and the degrading of the environment.

The instruments of public management facilitate the access of the community, in its whole, to public resources and the development vision of a community, the public administration playing the major role of managing these resources for a rise in life-quality levels within the community it represents.

The use of the Baia Mare model as a good practice example and the improvement of public management tools in the context of innovative approaches through the involvement of the local community and of the strategic partners forming a genuine partnership for the development of policies and actions.

Dissemination of the local experiences outlined in this paper regarding the integrated development gathered through the activities performed by associative structures (urban agglomerations, metropolitan areas, local action groups, community development associations) and consolidation of all local initiatives with respect to sustainable development and applying for and use of resources from European funds.

Connection to the European network (URBACT) dealing with the strategic management for land use, which is considered to be the most important tool for the approach and provision of competitiveness, attractiveness and sustainability of European cities/regions. This implies an approach at the strategic level (planning instruments, observation instruments), as well as at tactic and operational level (action plans, study cases) and it can generate a series of practical models and methods for similar communities interested in local development.

Drawing up new grounds that would settle the objectives and criteria based on which new partnerships will be built between regional or local governments and all the economic, social stakeholders, with structures that represent the civil society, with non-governmental organizations or other bodies interested in the sustainable development of communities.

Enforce the indispensability according to which the strategic and urban plans for large cities are elaborated and approved in accordance with those of the adjacent administrative divisions.

In order to approach the proposed objectives, we will present hereafter several proposals that would allow a professional approach of the issues related to integrated local development (Anghel, 2013):

- Creation of a participative framework, involving all the categories of local stakeholders in the decision-making process with respect to the sustainable development of the communities they are part of. Besides local authorities, representatives of the public sector, including decentralized institutions,

private entrepreneurs, professional associations, education or research institutions, unions, non-governmental organizations or other representative of the civil society should be involved.

- Development of local networks and partnerships for the use of the participative mechanism correlated with an efficient information and communication system, which will further allow the concentration of resources and the optimal exploitation of the local potential.
- Elaboration of three types of main tools meant to orient and promote a realistic and responsible vision upon the local development perspectives: a local development strategy that sets the medium and long- term objectives; an action plan that outlines the priorities and steps to be taken on medium and long - term for reaching the objectives set in the strategy, that will include cost assessment, identification of financial resources and how to apply for them; a portfolio of projects considered by the entire community as priorities for the sustainable development of the city or region.
- Completing the legal background for the integration of the strategic vision regarding spatial planning and city planning in the local and regional development programmes. Institutional and administrative capacity-building in local governments in order to elaborate the strategic development documents for each locality (Local Agenda 21, sustainable development strategy, integrated plans, portfolio of projects).
- Setting up a clear calendar for the preparation, elaboration and correlation of the strategic documents, of the mechanisms and related tools, necessary to apply for European funds foreseen for 2014- 2020, in order to be able to reach the objectives set by the European Strategy 2020 and by the national programmes (National Reference Programme, National Development Plan, Operational Programmes).

The case studies presented in the paper may represent models of good practice for any city hall in Romania as regards the increase of institutional and administrative capacity at the level of local authorities and civil societies, the management of polycentric territorial-administrative development

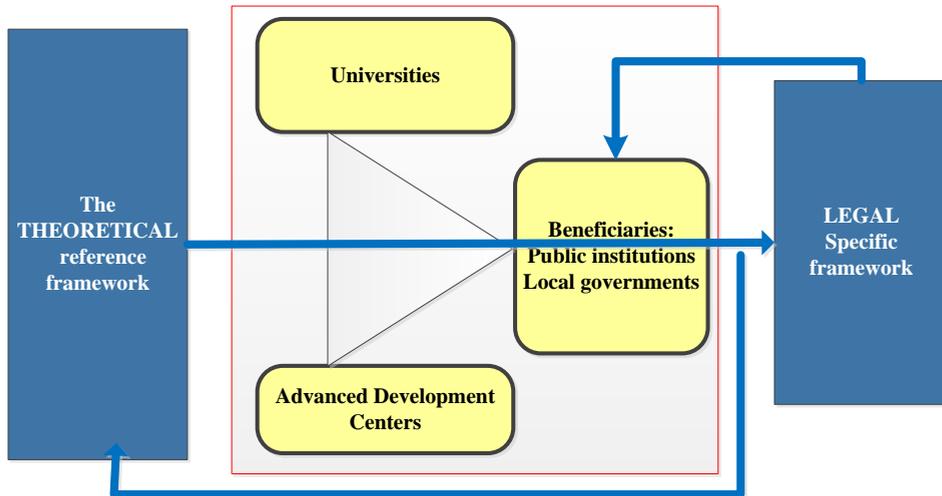
For the implementation of politicise related to the integrated polycentric development network, instruments specific to the territorial spatial planning (investment programs, territorial plans, monitoring of territorial development), non-spatial (budget, finances, administrative capacity) and strategic planning (strategies of regional development, coordination mechanisms, politics substantivise, strategic planning) are used.

The promotion of polycentric and balanced territorial development as an essential element for the territorial cohesion realization represents one of the priorities of Europe Strategy 2020. In this context, the formation and consolidation of the development poles as basic elements for the creation of polycentric networks must be supported by integrated politics at local and regional level.

This public institutional construction precedes and becomes an a priori condition regarding the success of an administratively-territorial durable development process (at the level of neighbourhoods, belonging localities) as well as at territorial level of a superior rank: microregional, county and regional.

The tactic direction of the public management modernization process. In all planning documents of the development at national level, the collocation “The triangle of knowledge” is used especially within the field of “Growth of Economic Competitiveness”. The collocation symbolically presents the importance of the

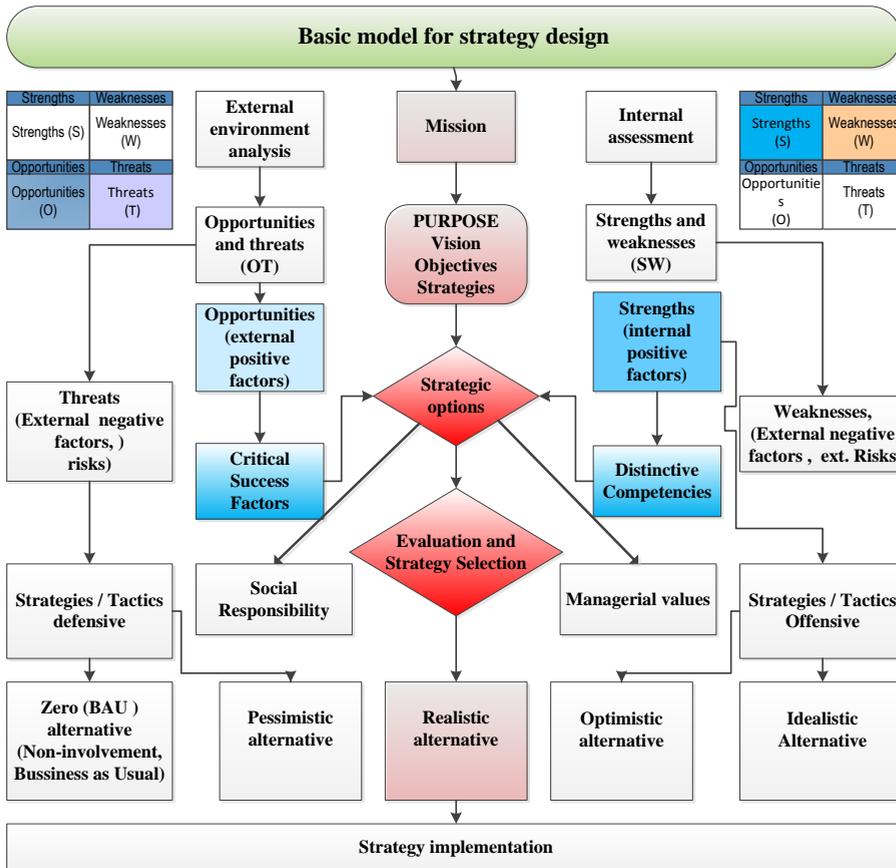
relationship between: (1) Universities (assimilated with fundamental research centres, (2) Development Innovation Centres (CDI – assimilated with platforms of applicative research, initiators of “pilot” projects, consultancy providers or facilitators of technology transfer) and (3) Enterprises, in order to ensure the competitive advantages on long -term period of some products or services.



**Figure 1:** The development process of public management  
Source: Anghel, 2013

The development process of public management based on the application of “The triangle of knowledge” presents the following advantages (Anghel, 2013; Anghel, 2006):

- It uses the advanced research (on long- term) and the theoretical foundation of the modernization instruments construction of the public administration ensured by the “university” partner.
- It ensures the optimizing process and efficiency of the construction and practical application (adaptation to the beneficiary’s specific) of the public management instruments, ensured by CDI specialised in different fields: Technology of Information and Communication, Human Resources, Public Relations, Public Politics, Financial Management);
- It represents an answer given by de practical application of the public management instrument that shall lead to the evolution of the theoretical frame of public management, ensuring its continuous development and adaptation to the modifications of public institutional environment from Romania;
- It contributes to the creation of a legislative frame adapted to real needs, tested by the national public system and not based on prognoses or opinions of an expert type;
- It allows the facilitation of a legislative frame whose norms were pre-tested by pilot projects and agreed on by beneficiaries.

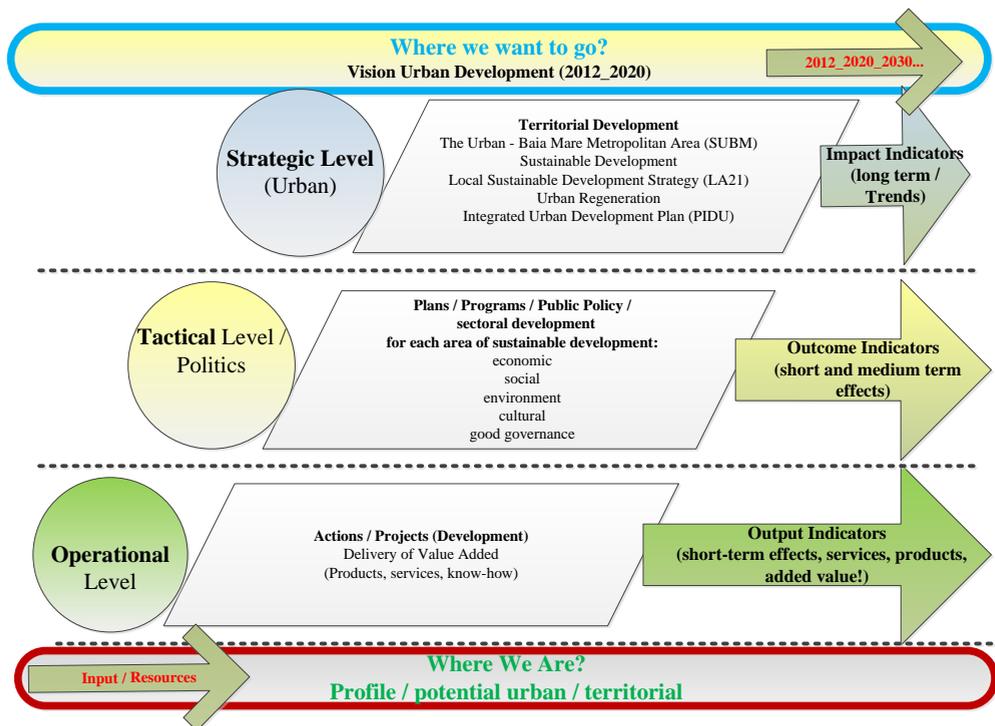


**Figure 2:** Model for strategy elaboration  
Source: Anghel, 2013

The base model used for the formulation of the strategy was used in all phases of the measurements, starting from a simplified model with approaches on two directions represented by the SWOT analysis part (analytical approach), respectively the visionary measurements (overview, mission, strategic targets). The two approaches have finally generated five types of strategic alternatives (zero alternative, pessimistic alternative, optimistic alternative, realistic and visionary alternative)

The model emphasizes the two great types of approaches (defensive and offensive) important especially in tactical phases that aim at medium- term targets.

Another advantage of the model is the emphasis and picture of the distinctive competitiveness and competent elements as critical factors of success, respectively the social responsibility and managerial values as important elements within the complete



**Figure 3:** Concept of Local – Territorial Integrated Development  
Source: Anghel, 2013

A series of public management instruments are interconnected in order to realise a unitary construction that covers the entire problematical aspects of a community at a county capital city level.

The Scheme of the Local-Territorial Development Concept synthetically presents:

(a) The content of the stages of local-territorial development planning:

- Definition of urban – territorial profile based on the quantitative indicators (statistics) and the qualitative indicators of the local resource types (natural, physical, human, social and financial);
- Evaluation of the development potential (based on the strategic analyses SWOT/PEST of the local – territorial profile);
- Establishment of strategic planning elements;
- Definition of the development overview, an ideal image of a desirable future, shared within the community;
- Establishment of development targets and measures (strategies and programmes)

From the territorial perspective of the administrative unit (subunits – neighbourhoods, or supra-units– territorial cooperation areas; microregional, counties, regional);

- From the sectorial field perspective of the local development integrated within the concept of durable development (economic, social, environment, culture, governing)

(b) The process of local-territorial planning, definitive for the local capacity evaluation of public management. It is defined through the involvement degree (civic participation) of all concerned parties in all planning stages (by information, consulting, participation ), ensuring the participative character of the elaboration, public assumption and application of local-territorial development politics.

(c) The levels and types of indicators of the monitoring and evaluation system of the implementation progress of development elements:

- Impact indicators (long- term effects on big groups of beneficiaries, the entire community), definitive for the degree of achievement of strategic objectives;
- Result indicators (short- term effects on some specific target groups) that define the degree of the achievement of the programmes, applied plans, respectively of the specific objectives and planned measures;
- Exit indicators/“output” (services and products realised as a result of projects’ application, services provided within the Local - Territorial Action Plan)

### **3. Conclusion**

The sustainable development strategy of the Baia Mare city defines the general frame in what the decision-making process in urban planning is concerned. It is a comprehensive document which defines the Urban Agenda for Baia Mare, putting together visions, projects and opportunities with a particular stress on sustainable options. It offers solutions for development creating a sound basis for the future of the city as well as a frame for a better use of structural funds.

In the process of drawing the sustainable development strategy of the Baia Mare municipality there has been used for the first time in Romania the poster-plan type of cartography, which presents the main strategic choices until 2020. It is a synoptic document which projects the future of the community, a perspective document which puts into the limelight both the conceptual axes of the city’s development and the zones envisaged for intervention within the following years. ( zones of urban development, zones of urban regeneration).

My recommendation refers to the extrapolation of this collocation at the level of public management by the promotion and support of a development process of public management at national and local level based on the collocation named “The Triangle of knowledge”, that emphasizes the partnership relationships that must be built at the level of a community, with extended possibilities at territorial level.

Thus, a useful co-operation between the fundamental actors of the community that must participate in formulating the development overview and the elaboration and implementation of all fundamental documents that contribute to the increase of local capacity of development is achieved.

The development of the management capacity of local public administration institutions requires the use of some modern management instruments that shall lead to an increase of the administrative capacity at local level.

The case studies presented in the paper may represent models of good practice for any city hall in Romania as regards the increase of institutional and administrative capacity at the level of local authorities and civil societies.

For the implementation of politicise related to the integrated polycentric development network, instruments specific to the territorial spatial planning (investment programs, territorial plans, monitoring of territorial development), non-spatial (budget, finances,

administrative capacity) and strategic planning (strategies of regional development, coordination mechanisms, politics substantivise, strategic planning) are used.

The promotion of polycentric and balanced territorial development as an essential element for the territorial cohesion realization represents one of the priorities of Europe Strategy 2020. In this context, the formation and consolidation of the development poles as basic elements for the creation of polycentric networks must be supported by integrated politics at local and regional level.

The Baia Mare Urban System presented in this paper has all the characteristics of a model structure of polycentric development that has elaborated/formulated a development overview on long and medium- term with all the strategic, tactical and operational elements that support the development within a well defined territory.

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# GOVERNANCE, CULTURE AND DEMOCRACY: INSTITUTIONS AND ECONOMIC DEVELOPMENT OF EU MEMBER STATES

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**Abstract:** *This paper intends to understand the major institutional factors related to the economic development of the European Union (EU) countries in the last two decades. It provides some contributions to the institutionalist debate of the present crisis of the European Union, and within it, the Economic and Monetary Union (EMU). The two main issues of the empirical research are the effect of the different institutions on economic growth and the relative importance of institutions compared with the traditional macroeconomic components of economic development. The institutionalist traditions of comparative political science and political economy as well as institutional economics define the framework of interpretation. The analysis sheds some light on the relationship between economic development and the different institutional dimensions, namely the legal environment, political institutions, public policy institutions (governance) and the informal institutions, the cultural components of the economic-political behaviour. The empirical research examines the development pattern of the European Union countries between 1993 and 2011 as well as the relationship between economic development and institutional quality in that period by descriptive and explanatory statistical methods. The results reveal strong relationship among the different aspects of institutional quality in the EU countries; within Europe we cannot observe a Singaporean type contradictory constellation between the quality of democratic institutions and public policy effectiveness. The path of European development has been drawing a conspicuously strong correlation among the different institutional dimensions: the high quality of democratic institutions, the respect of the rule of law and property rights and the effective governance are going hand in hand with the growth-supporting components of the culture. In cultural terms, the high level of trust, respect and self-determination as well as the lack of obedience ensure the most successful long-term growth pattern in Europe. Another important finding is that the EMU countries are conspicuously heterogeneous in their institutional quality and the Mediterranean members of the Euro area are institutionally closer to the non-EMU-member Central-Eastern European countries than the core EMU countries. Concerning the economic policy consequences, the heterogeneity of the informal institutions fundamentally challenges the effectiveness of the approach of stronger harmonisation by stricter formal rules and stricter sanctions against the norm-breaking Euro area members.*

**Keywords:** *economic development; European Union; Euro area; institutions; culture, democracy*

**JEL classification:** O43; O52; P16

## **1. Introduction**

The European Union (EU) is in deep crisis; at the moment there is no serious professional or internationally respected public figure who can debate it. In mere economic sense it is obvious that the global financial crisis has implied a debt crisis and a subsequent long-lasting recession in several countries of the EU. At the beginning of 2013 it seems that the European Union as an actor in itself has more difficulties in managing the crisis than other developed regions of the world. Moreover, it is already doubtful whether the EU, and within it especially the group of the countries using the common currency, the Euro (the Economic and Monetary Union, EMU) will be able to survive this crisis without losing some of its members. Indeed, the EMU (and also the entire EU) is seriously endangered as a political construction, at least in its present form (Habermas 2012).

Most of the policy suggestions presented as 'solutions' of the present crisis explicitly or implicitly derive from the diagnosis that the problem is ultimately the weakness of fiscal federalism in Europe. Briefly, the mainstream approach is that the Eurozone can be saved only if decision-making is federalized (Darvas 2010); the efficient management of the present crisis of the EMU requires stricter rules as well as stricter sanctions against the norm-breaking countries (Hodson 2012). It is noteworthy that even those who debate this therapy accept the 'federalism problem': the typical counter-arguments point to the problems of legitimacy of the EU institutions, the contradictory nature of sovereignty within the EU, and the problems of the European identity, the lack of a European 'demos' (Cederman 2001, Schimmelfennig 2010). But these problems have already been well-debated several times, among others, nine years ago when a big-bang enlargement happened (see the overview of Körösenyi, 2004 about that). Logically, the absence of a strong common European identity implies a relatively weak solidarity potential towards other EU nations: the willingness of support for bailout purposes in a time of an enduring crisis is moderate – incomparable for example with the quasi-automatic solidarity of West-German citizens and politicians towards East-Germany in the decade after the German reunification (Dochartaigh 2010).

In this paper I intend to open the black-box of the European institutions. By stepping out from the federalism debate frame, I interpret the development of the European economies in the last two decades from a deeper institutionalist perspective that integrate the recent theoretical and empirical findings of new institutionalism in political science as well as in comparative macroeconomics.

The next section briefly deals with the potentially relevant institutional approaches in the context of the EU countries' development. Section 3 analyzes empirically the economic and institutional development of the EU and EMU countries between 1993 and 2011. The final section presents the concluding remarks and discussion.

## **2. Institutional development and economic growth**

The institutionalist perspective has recently become integrated in the main streams of the different social sciences. In the political science the expansion of new institutionalism started in the eighties (Peters, 2005:16). In organisational sociology, the revival of the 'embeddedness' approach of Polányi (1957) in the seminal paper of Granovetter (1985) implied a culturalist research perspective: the role of values and norms in the working of organisations became a new research programme in the nineties (DiMaggio, 1990). Moreover, the institutionalist approach is obviously

important in economics as it was already part of the classical school (Smith, 1899[1776]). However, the specific institutional explanations of the basic question of growth theory (why some countries are rich and why are others poor), has only come back into the mainstream in the last two or three decades when the new growth theory approach integrated the major results of institutionalist economics (Helpman 2004, Czeglédi 2006).

### **2.1. Growth and institutional quality in the European Union**

The European Union and especially the Economic and Monetary Union as one of its enhanced institutionalist cooperation projects has followed the logic of pro-active institution-building: the less developed countries of the community are supposed to incorporate the 'good' formal institutions of the most developed ones. Theoretically the EU and again, especially the EMU is supposed to be a convergence club (Baumol, 1986): the criteria of entrance select among the aspirants, and the applied new rules and organisations (in terms of North 1990: the formal institutions) will help the less developed countries to gradually converge towards the more developed ones. However, the imitation of the 'best' formal institutions has not necessarily implied a convergence in economic development. In this context, the literature suggests four potential institutional factors of economic development (Bartha, 2012): (a) the legal institutions, (b) the political institutions, (c) the institutions of governance (professional bureaucracy, public policy expertise) and (d) the informal institutions (values and norms orienting the behaviour of political and economic actors).

### **2.2. Research questions and hypothesis**

This paper attempts to answer two main questions: (1) What is the effect of the different institutions on economic growth in the EU and the EMU countries? (2) What are the relative importance of the different types of institutions compared to each other and the traditional macroeconomic variables? The hypothesis to be tested here is the following: as the last two decades of the European development was characterized by an increasing convergence in the formal (legal and political) institutions, the stubborn differences in economic development levels are mainly caused by the differences in informal institutions and governance.

## **3. Empirical research**

### **3.1. Variables, operationalization**

The growth accounting framework is the starting point for the empirical research; namely the augmented Solow model (Mankiw et al. 1992:408) that among the explanatory variables of growth includes the accumulation of human capital as well (in addition to physical capital and labour). In this context, the role of institutions is reflected by the unobserved total factor productivity (TFP), as a country's total factor productivity 'is a function of the country's policies and institutions' (Parente 2001:56). Consequently, the different (legal, political, policy and cultural) institutional approaches are rival specifications of the TFP residual in the growth accounting.

#### **3.1.1. Dependent variable**

The dependent variable chosen for this research is economic growth. The indicator is the change in GDP per capita in Purchasing Power Parity between 1993 and 2011.

The source of these data (as also for other macroeconomic data) is the Penn World Table 7.0 (Heston et al., 2011) database for 1993-2009; the values for 2009-2011 are extrapolations based on Eurostat data.

### 3.1.2. Independent variables

#### Macroeconomic variables

The independent variables are specified in the framework of conditional convergence (Barro- Sala-i-Martin, 1992:226). The first independent variable is the *level of economic development (GDP per capita in Purchasing Power Parity) in 1993*. If the quality of institutions does not play a major role in long-term economic growth, this variable basically defines the trends: the poorer countries should gradually but steadily converge towards the most developed ones.

The next independent variable is the *change in physical capital*; the proxy of it, following the international practice, is the investment/GDP ratio. The *change of labour* is measured by the average change in the number of people employed, the technological change and the amortisation (a negligible factor in the present analysis) are supposed to be 0.05 (an international convention since the seminal paper of Mankiw et al., 1992).

I have used a less conventional indicator for the proxy of *human capital investment*. Among others, van Leeuwen and Földvári (2008) revealed that when we compare the EU countries, the use of the conventional 'average years of education' proxy overvalues the human capital of the Central-Eastern European countries. Therefore I have applied as a proxy of human capital investment the indicator of 'cognitive skills' developed by Hanushek and Woessmann (2009), although with some modification. Their 'cognitive skills' indicator is derived from the OECD Programme for International Student Assessment (PISA) survey: cognitive skills are "measured by the simple average of all observed math and science scores between 1964 and 2003 for each country" (Hanushek and Woessmann, 2009:8), it is probably biased somewhat against the literacy skills. Consequently, I have also included the simple average of all observed literacy skills scores; this 'cognitive and literacy skills' is the proxy of human capital investment used for each of the European countries.

#### Institutional variables

I have operationalized four different institutional type variables from different international surveys. The proxy of the Northian *formal institutions* is the sub-index of Legal Structure and Security of Property Rights from the 2011 Annual Report of the Economic Freedom of the World from the Cato Institute (Gwartney et al., 2011). The proxy of the Northian *informal institutions*, i.e. the cultural components guiding the behaviour of the economic and political actors comes from the 'culture' principal component of Williamson and Mathers (2010). The authors constructed the values of this culture principal component from the different data collection waves of the World Values Survey; according to their interpretation, trust, self-determination and respect are positive correlates of the economic development, while the obedience is a negative component of that. The proxy of the quality of democracy, the quality of *political institutions* comes from the democracy index of the Economist Intelligence Unit. This index involves the quality aspect of the democracy (Ringen, 2011); in addition, we have values for all of the EU member states for several measurement periods. Finally, the proxy of the *governance*, the quality of expert-bureaucratic

institutions comes from the World Bank “Worldwide Governance Indicators (WGI)” project (Kauffmann et al., 2010) the sub-index of government efficiency was selected for this. By using long-term average values for all of the four institutional proxies I followed the international conventions.

### 3.2. Main findings

#### 3.2.1. Institutional relations between legal institutions, democracy, governance and culture

The comparison of the relative standard deviations (see Table 1) supports our hypothesis: among the 26 European Union member countries, the most important differences can be registered in the informal institutions. However, the smallest differences are in the quality of democracy, while in the legal institutions and the quality of governance we find more significant differences (but less significant ones than in the dimension of culture).

**Table 1: The heterogeneity of institutional indicators**

	LEGAL	CULTURE	GOVERN	DEMOC
Standard deviation	1.18	1.80	12.99	0.79
Means	7.32	5.24	73.50	8.06
Relative standard deviation	16.15	34.34	17.68	9.75

Sources: LEGAL (Legal Structure and Security of Property Rights): Cato Institute, Gwartney et al., 2011; CULTURE: Williamson and Mathers (2010); GOVERN (Government Effectiveness): World Bank “Worldwide Governance Indicators (WGI)” project (Kauffmann et al., 2010); DEMOC (Democracy), Economist Intelligence Unit Democracy Index

Nevertheless, it would be misleading to draw a conclusion of ‘incompatibility’ between democracy and culture in the EU. The correlation matrix of the four institutional variables reveal a strong relationship: the bi-variate correlation is significant at a 0.01 probability level between each of the four variables.

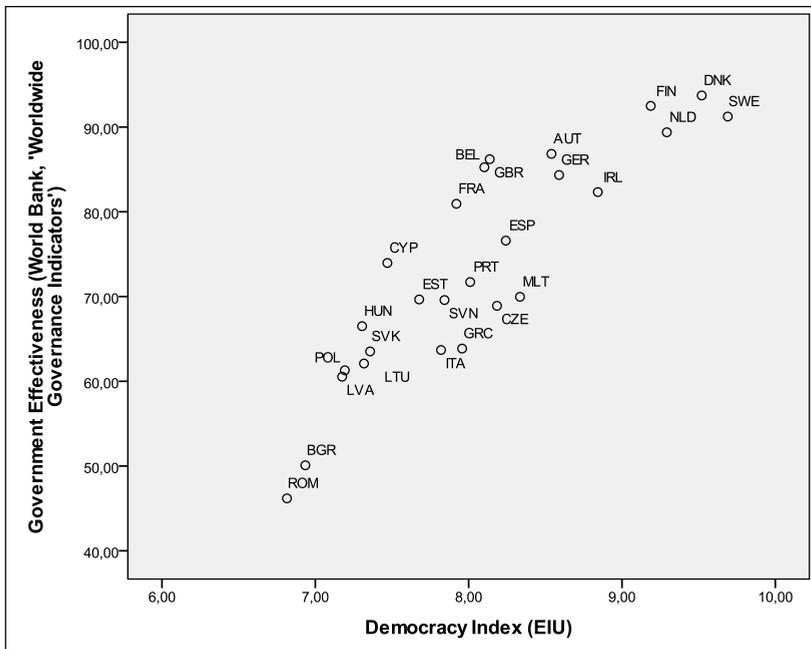
**Table 2: Correlation between institutional factors**

	LEGAL	CULTURE	GOVERN	DEMOC
LEGAL	1.00	0.72	0.93	0.86
CULTURE	0.72	1.00	0.69	0.82
GOVERN	0.93	0.69	1.00	0.89
DEMOC	0.86	0.82	0.89	1.00

Sources: LEGAL (Legal Structure and Security of Property Rights): Cato Institute, Gwartney et al., 2011; CULTURE: Williamson and Mathers (2010); GOVERN (Government Effectiveness): World Bank “Worldwide Governance Indicators (WGI)” project (Kauffmann et al., 2010); DEMOC (Democracy), Economist Intelligence Unit Democracy Index

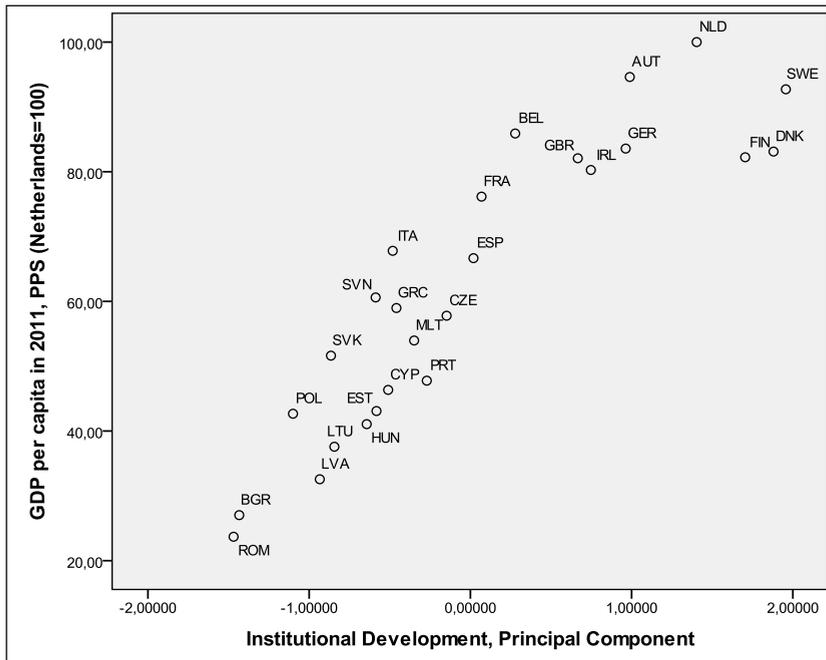
The quality of democracy correlates strongly with all of the three other dimensions, but the strongest statistical relationship (93%!) can be registered between the government effectiveness and the legal structure. These findings indicate that the

Lee-thesis, the assumed Singaporean type contradiction between democracy and government effectiveness is not valid in the EU on the long-run (for more criticism about the Lee-thesis see: Knutsen, 2010); either the quality of democracy or the government effectiveness is the strongest in the Nordic countries, while Bulgaria and Romania are the laggards in both aspects (see Figure 1).



**Figure 1:** Quality of democracy and government effectiveness in the EU  
Sources: Economist Intelligence Unit and the World Bank

Consequently, it requires a specific methodological treatment to minimize the obvious endogeneity and multicollinearity problems: we have to include a common factor of institutional development in our explanatory models (and not four different institutional variables). The principal component analysis derives one principal component from the four institutional dimensions that explain 86.5% of the variance of the original institutional variables. The strong relationship between this constructed institutional development component and the economic development level supports our interpretation about the underlying institutional factors behind the seemingly economic problems of the European integration. Figure 2 regarding the EU member countries' economic and institutional development obviously indicates that the Economic and Monetary Union is not the club of the most developed European countries; neither in economic, nor in institutional development terms. Not only because the institutionally two most developed countries of the EU (Sweden and Denmark) are not members of the EMU, but also because of the apparent weaknesses of the Mediterranean countries' institutions.



**Figure 2:** Institutional and economic development in the European Union  
Sources: Penn World Table 7.0 and calculations by author

Among other things, our institutional data indicate that one founding member, Italy is more like the two countries that joined the EU only five years ago (Bulgaria and Romania), than Sweden (the institutionally most developed EU member). It is also noteworthy that the institutional development level of France is only around the EU average and it is significantly weaker than that of Germany; paradoxically, in addition to Austria, the institutional development level of Germany is the closest to that of Ireland and the United Kingdom. Though there are several arguments that multiple development clubs are forming within the EU in the spirit of differentiated integration (Koller, 2012), it is doubtful that the EMU can be considered an outstanding development club of enhanced financial cooperation. This is not true in economic terms; it is even less true in institutional development terms. Moreover, because neither the Czech Republic, nor the United Kingdom are EMU members, it is not even true that the common currency area concentrates the EU average countries in economic and institutional development terms.

The hierarchical clustering process of the institutional dimensions draws three sub-groups among the more developed EU countries: the three Nordic states and the Netherlands form the group of the most developed countries; Germany, Austria, Ireland and the United Kingdom constitute a second group, while France, Belgium and Spain are on the margin of the more developed EU countries. The institutionally less developed Southern and Eastern EU member countries are positioned along a continuum; only Bulgaria and Romania form a separate cluster.

### **3.2.2. Economic development: institutional and other explanations**

I would like to reflect briefly on the weight of institutional and other explanations in economic development. Though the initial development level (in this analysis in 1993) correlates significantly and negatively with the economic growth in the last two decades, the moderate value of the determination coefficient (0.58) conforms with our expectations, that is, the more refined explanations can have empirical relevance in the development of the EU countries. The inclusion of our institutional development principal component significantly increases the explanatory force: in this model the value of the adjusted  $R^2$  is 0.65. However, in a technical sense, our institutionalist explanation is weaker than the human-capital-augmented Solow model (the adjusted  $R^2$  increases to 0.76). Indeed, the human capital seems to be the decisive factor (besides the initial development differences). Nevertheless, this does not mean that we have to neglect the institutional effects in interpreting the economic development of the EU countries; the novelty of our human capital investment proxy is precisely the inclusion of the labour market adaptability dimension in the educational variable that means an implicit incorporation of the institutions, especially the informal institutions.

## **4. Conclusion and discussion**

This paper presented an institutional, comparative political economy perspective for the EU countries' growth patterns; it also offered the institutional heterogeneity thesis in framing the enduring crisis of the EU and the Economic and Monetary Union. Four potential institutional explanations of long-term growth were operationalized: the formal institutions by the legal structure, the Northian informal institutions by the cultural components guiding the behaviour of actors, the political institutions by the quality of democracy, and the bureaucratic-expert institutions by the quality of governance.

The expectation of the empirical research was that the formal institutional resemblance of the EU and especially the EMU countries is in sharp contrast with the stubborn and significant differences along the dimensions of the governance and the cultural components. However, the empirical findings are not undoubtedly supporting this hypothesis. In fact, the path of European development draws a strong correlation among the different institutional dimensions: the high quality of democratic institutions, the good legal structure, the efficient government and the supporting components of culture (trust, respect and self-determination and the lack of obedience) are going hand in hand.

This implies that the present crisis of the Eurozone is not mainly economic in nature, and it is not predominantly the problem of the supposed bad governance of the South-European political elites. The root of the political crisis comes from the much deeper institutional heterogeneity; concerning their institutions, the older Southern EU member states are much more like the new Eastern-Central EU member countries than the institutionally most developed Nordic ones. Because of the endogenous nature of this institutional heterogeneity, the stricter rules and the stricter sanctions against the norm-breaking countries are unlikely to solve the crisis and preserve the survival of the Eurozone in its present form. The best case scenario is a slow, gradual convergence when the constant human capital improvement of the less developed EU and EMU countries imply a self-reinforcing improvement in the legal and political institutions, governance and the cultural components guiding the behavioural patterns of economic and political actors.

Why can we observe these conspicuously strong relations between the different institutional aspects in Europe in the last two decades? One possible explanation derives from the global interconnectedness, the increased role of perception of the global financial and capital markets. Practically all of the EU member countries depend basically on the external perception, but they depend independently (and not together as the EU or the EMU). The country risk premiums are obviously country-specific ones, and they reveal the global intuitive perception of the major financial and capital market players about the economic and institutional development prospects of the individual countries. The presented strong institutional heterogeneity within the EU and the EMU shed some light on the enduring European crisis, nevertheless these findings are rather preliminary, and should be tested by more subtle indicators and on longer time periods as well.

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# CRITICAL FACTORS IN HRD PROJECTS' IMPLEMENTATION: EVIDENCE FROM PUBLIC UNIVERSITIES IN ROMANIA

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**Abstract:** *For Romania, European Integration came with new challenges for the entire society, especially for investment project promoters, including public higher education institutions. Investments in human capital development and education have an important role in a country's economic development and growth but, in spite of the large number of human resources development public projects being financed, major problems were identified in their implementation process, particularly factors from the macro-economic and institutional environment. Most of the current interest in this area is centered on identifying and analyzing these key factors since their understanding might lead to ensuring an improvement of the implementation process and to a project's success. In this context, our paper's objective is to provide a set of critical success factors for HRD projects' implementation process by developing a framework for external environment factors' analysis from a public project management perspective. Taking into consideration the current impact of the external environment' factors upon projects in Romania, in this paper we chose to focus our attention only on the critical success factors of the external socio-economic, institutional, technological and cultural environment, that affect the implementation phase of a project. We started with an analysis of the Romanian context that allowed us to develop a conceptual framework. We then realized a survey on a sample of three Romanian public universities which implemented projects in human capital development by developing and applying a questionnaire to 112 persons involved as management in projects in order to identify the key factors from the external environment that affect a project's implementation process. Results show that the most significant factors, with a negative impact, are political and economical ones while technological and cultural factors are perceived as factors with a positive influence. Our conclusions have a high informational content and can be useful for those involved in policy making and building institutional capacity in terms of human resources development.*

**Keywords:** *project management, human resources development project, critical factor, PESTC analysis, implementation management.*

**JEL classification:** C83, I25, O15, O22.

## 1. Introduction

Although Romanian universities, especially public ones, should access EU funds for HRD projects, the current low absorption degree and the problems manifested as well as the certainty that the funding will reappear in the next financial programming period (2014 – 2020), underlie the necessity as well as the opportunity to study HRD

projects' implementation framework and the factors that determine its success or failure.

In this sense, our study's objective is to provide a set of critical success factors for HRD projects' implementation process by developing a framework for external environment factors' analysis from a public project management perspective.

In order to fulfill the paper's objective, we have started with an extensive literature review, approaching the topics of project management, HRD projects, key factors and their study in the specific literature, followed by an analysis of the Romanian context which allowed us to develop and test a conceptual framework.

It should be noted that even though the originality of our research does not rely on the method applied (questionnaire survey) our results and conclusions have a high informational content and can be useful for those involved in policy making and building institutional capacity in terms of HRD.

## **2. Literature review**

### **2.1. Critical success factors in projects**

Project Management has seen in recent years an important growth as a research area given that the project work environment has become increasingly complex and unstable. In this context, the analysis of factors that determine the success or failure of the projects appeared, precisely because often project results do not meet stakeholders' expectations (Jugdev and Müller, 2005).

Key success factors in projects can be seen as a series of conditions, areas, circumstances that contribute to the fulfillment of projects' results (Ika, 2007) or, in other words, areas where "things must go right" (Rockart, 1978) for the successful implementation of the project and for its successful results.

Although the number of articles that analyzed projects' critical success factors is extensive (Kwak, 2002, Ika, 2007, Ika, 2012, Khang and Moe, 2008, Dvir et al, 1999, Stankovic et al, 2013), there is no general opinion regarding key factors: some factors seem to have a universal character, appearing in several studies, while others are linked to the specific nature of the project. Meanwhile, the increasing diversity of projects highlights some of their characteristics, depending on the type of project analyzed. The idea that projects are different and that these differences render differences in the "optimal" management path also appears in various studies (Howell et al, 2010).

Thus, for the hard category of projects (construction projects, institutional and technological infrastructure - equipment, software platforms), usually success is determined through quantitative criteria whilst for the soft category of projects (education, health projects), qualitative criteria are used (Crawford and Pollack, 2004, cited by Ika, 2007).

In terms of international development projects, the literature is relatively limited. Some of the most relevant studies are conducted by Khang and Moe (2008) and Ika et al. (2012), studies based on the analysis of responses obtained by distributing questionnaires. Meanwhile, Kwak (2002) performed a review of 10 categories of internal and external variables that act as challenges in international development projects. In the case of international development projects, the macro-economic and institutional environment's characteristics of the receiving country play an important role, along with internal factors related to monitoring and coordinating the project.

We consider that their importance is directly linked to the uniqueness of the macroeconomic, institutional and cultural environment of these projects, regardless of their field of activity (education, health and nutrition, water and sanitation sewage, environment, infrastructures, judicial or institutional reforms).

On the other hand, organizational development projects have been the subject of analysis from different perspectives, the most important being related to the information infrastructure (hardware and software) and integrated business systems connected to organizational change efforts and Business Process Reengineering. The critical factors in the implementation process occur mainly from the internal, organizational environment or from stakeholders' relationships as underlined by the studies of Chow and Cao, 2008; Stankovic et al, 2013; Ram et al., 2013.

Human resource development projects implemented through structural instruments have both an international dimension, determined by the source of financing funds, approaching thus the typology of other projects funded by international organizations (World Bank, EBRD) and an organizational development dimension which completes projects that aim the organizational infrastructure component.

Human capital development is one of the major directions through which a country can remodel. SOP Human Resources Development (SOPHRD) has a range of measures and funding lines, some of which are accessible to universities in general (in particular, to the public ones). Through structural instruments of European Union, public universities in Romania have been a major recipient of these funds through three priority axes: "Education and training in support for growth and development of knowledge based society", "Linking lifelong learning and labour market" and "Increasing adaptability of workers and enterprises". In addition to these axes and areas, universities could access, as training providers, funding from other priority axes, especially "Promoting social inclusion".

The current low absorption stage of this program, the gaps manifested in its progress, and the certainty that the program will reappear in the financial programming period of 2014 - 2020, requires studying the implementation framework and the factors that can determine its success or failure.

Although extremely generous in terms of investment and human capital development possibilities, SOP HRD showed major gaps in implementation. The national studies in this area aren't numerous, being limited to professional analysis of experts or consultants or policy analysts. Results may be mentioned that have indicated both economic and political system problems, both at a macro environment and organizational and institutional: the implementation structures, the human resources involved and the systems of monitoring and evaluation (Oprescu et. al., 2007, Gherghinescu & Rinderu, 2011), unknown calendar of the calls for projects, lagging deadlines for project submission, modifications in the documentation for the applications for financing, bureaucratic excess (bureaucratic fanatics), delayed evaluation of the applications (Cace et. al, 2009), lack of analysis regarding ways to complete the target group, unrealistic financial forecasting for the project, overestimated indicators (Braşoveanu et. al, 2011), or unstable political environment, which has undergone many changes in 2007-2012 (Stoina, 2012).

All of the mentioned aspects underline the necessity for studies to highlight critical implementing factors depending on the specifics of beneficiaries.

### 3. Research model and design

Taking into consideration the current impact of the external environment' factors upon projects in Romania, as underlined above, in this paper we chose to focus our attention only on the critical success factors of the external socio-economic, institutional, technological and cultural environment, that affect the implementation phase of a project.

The starting point of this research was the model proposed by Ika et al., 2012, which we adapted and developed by focusing on the external environment variables that may affect a HRD project. In view of our research objectives, we consider that the most appropriate external environment assessment model is PESTC which, as shown in the specific literature, is often used as a strategic instrument in project management (Belassi and Tukel, 1996). The model contains factors that can be divided into five categories: political, economic, social, technological and cultural. The variables chosen for each category are presented in table 1 below.

**Table 1: The framework model's variables**

Type of factor	Variables
Political	Stability of the projects implementation' legal framework; The complexity of the projects implementation' legal framework; The existence of support from local authorities or other public bodies in the implementing process; Faulty governmental management of European funding sources.
Economic	Self-financing capacity of projects at the government level; Self-financing capacity of projects at the institutional level; Labor market characteristics.
Social	Partners' experience in implementing EU funded projects; The demographic evolution of groups connected to the academic environment; Potential beneficiaries' reluctance to integrate in the target group.
Techno-logic	The partners' quality of the technological / research infrastructure and informational system; The partners' logistic capacity to support the project; Automation of operational procedures.
Cultural	Relations with the administrative system that manages EU projects; Stakeholders' attitude towards the possibility of project completion; Corruption in the institutions responsible of project implementation; Stakeholders' attitude towards change; The universities' perception within the economic and social environment and the community.

In order to better substantiate our model, we then analyzed each group or category of variable, as follows:

Political factors – currently the Romanian political environment is characterized by a high degree of instability, political tensions and a poor quality of regulations. Although experience has shown that one of the main issues in implementing HDR projects is its regulatory framework, the World Bank 2007 study placed Romania on the 71<sup>st</sup> place (out of 212 states) for its quality of regulations.

Economic factors - The economic environment should be characterized by growth, innovation and mobility, aspects that are a reflection of economic interconnections, the result of globalization, growing grazing due to technological advances. In Romania, we are faced with a general context of economic crisis that accelerates, underfunding and poor access to education with an uncertain nature of economic forecasts.

Social factors - such as demographic evolution, unemployment and the need for retraining, education level, unequal access to education by income, inclination towards continuing education such as lifelong learning, cross-border migration between rural and urban areas or from small towns to the cities, determine the need to implement projects aiming target groups of population in various stages of initial training or certain levels of professional development. On the other hand, the Romanian academic environment constantly tries, without a clear success, to integrate subject areas in initial and continuous training of human resources to meet the real needs of the market.

Technological factors are very important in the management of project implementation, logistics infrastructure, office equipment and hardware and software support, multimedia equipment and virtual educational platforms have grown more in the last decade within the Romanian public universities, for the following reasons: (i) the existence of alternative financing sources through projects and the increase the tax education, especially in socio-economic and legal sciences, and (ii) a broad financial autonomy that allows the use of resources according to the university's own institutional development strategy in accordance with the law.

Cultural factors are less studied in the literature as success factors of project implementation. We only found brief description of some in Kwak, 2002. However, their presentation is in terms of cultural differences that arise when projects involve partners from different countries (according to the comparative management study paradigm and not project management), when this paper proposes a different approach, that justifies their inclusion in the model (complement the traditional PEST model): taking into consideration national cultural factors that through their characteristics can support/impede the successful implementation of projects. On the other hand, we believe that there is a two-way relation between the institutional architecture of a country and its cultural paradigm: the cultural profile of a country consists of its institutions and the institutional framework is set up by the members of a country (culture) through their deepest values (Brancu, 2007).

On these grounds, we formulated our first research hypothesis, as follows:

H1. PESTC factors exert a significant impact on the successful implementation of HRD projects in Romania.

Corruption, institutional bureaucracy, unpredictable change and poor institutional governance are, in our opinion, the environment variables that define the institutional cultural context. Corruption is a variable that presents strong negative aspects in Romania. According to Transparency International, Romania registered a score of 48, whereas 0 means that a country is perceived as highly corrupt and 100 means it is perceived as very clean. Of the 176 countries surveyed, Romania ranked 66<sup>th</sup>, far from the rankings recorded by other EU countries. These variables are especially important for the issue of this paper since they may be generalized at an institutional level. In these circumstances, we consider that the political, economical, social and cultural variables indicated in table 1 above have a negative impact on HRD projects' implementation, while technological ones, especially

logistics and infrastructure contribute to the project's success, ensuring a proper functioning of the project partnerships, a real-time relationship with the target groups, the application of modern methods for conducting trainings and the possibility of implementing software platforms for practical applications (business simulation). Thus, we then formulated the 2<sup>nd</sup> research hypothesis:

H2. Political, economical, social and cultural factors have a negative impact whilst technological factors have a positive impact on HRD projects' implementation.

Political factors essentially determine the macro context in which any type of project develops, in that it generates the legal and regulatory framework of the entire project cycle, which includes the implementation phase. The relations between national responsible authorities and the European Commission are fundamental in ensuring the coherence of programs and projects. Given the political instability generated effects in the management of the Managing Authority, the European Commission's audit reports were largely negative, causing interruption and suspension of funding. The uncertain nature of economic forecasts generated a lack of confidence of both beneficiaries in terms of self-financing ability and target groups in terms of results' sustainability. As such, we formulated the third hypothesis:

H3. The negative impact of the political and economical factors is more significant than that of the social and cultural factors upon HRD project's implementation.

## **4. Methodology and results**

### **4.1. Research methodology**

Hypothesis testing and validation was performed using quantitative methods of gathering information, a questionnaire-based survey, considered appropriate in the context of the research's objective.

The questionnaire was developed with the intention to offer the possibility of appreciating the impact of preselected variables from the external environment, as perceived by the subjects. The questionnaire contains a set of 18 items, grouped according to the five types of factors from the external environment, as mentioned and explained in table 1 above and it also includes a section for the collection of socio-cultural information considered relevant for testing the established hypotheses. For each item a five step scale was attributed, from major negative impact (1) to major positive impact (5). The process of information collection was performed during two months (January and February 2013) by distributing questionnaires to a number of 210 employees of 3 public universities from the Western Region of Romania, representatives in terms of academic and research results, that developed such projects since 2007. The sample selection process involved personnel that was part of a HRD implementation process from a decision-making point of view (management functions) or from an administrative one (administrative functions).

### **4.2. Data analysis and interpretation**

The information collected was processed using SPSS 17. Of the 210 questionnaires distributed, 112 were validated. Our preliminary analysis of the data revealed that the sample is fairly balanced with regards to the socio-cultural variables considered. The descriptive analysis of the sample shows that the majority of the respondents are male, within the 30 – 45 age group and with a longevity under 5 years. Also, the respondents are predominantly teaching staff (64%) taking into account that the SOP HRD's structure encourages active participation of the teaching staff in project

management structures. As for the respondents' experience in implementing HRD projects, for both of the variables considered (project team function and participation in HRD projects), results show that our targeted group is highly experienced due to their decision-making positions in project teams and their participating in a large number of projects of this kind. Thus, we can state that all of the information provided and analyzed as follows is consistent and reliable from this point of view. In order to determine the integrity of the success factors' scale, we performed a reliability analysis by computing all of the variables for the five external factors.

**Table 2:** Reliability analysis of the critical factors

<b>External environment factors</b>	<b>Cronbach alpha coefficient value</b>
<b>Political factors</b>	0,837
<b>Economical factors</b>	0,712
<b>Social factors</b>	0,446
<b>Technological factors</b>	0,746
<b>Cultural factors</b>	0,754

The values calculated for the Cronbach alpha coefficient (as shown in table 2) achieve a level greater than 0.7, except for the Social factors. When analyzing individual items within the scale, we observed similar coefficient values, thus proceeding to the elimination of this factor from our research framework. This poor internal consistency of the Social factors can be explained through our selected sample characteristics – implementation project team members, when the individual items included in this factor category are perceived with a greater intensity by HRD projects' targeted group since they determine the project's social output.

Next, we focused on analyzing the respondents' perceptions regarding the type of impact (negative or positive) on the implementing process of the four external factors, through their attributed items (table 3).

In view of the project management staff's perceptions, the four remaining types of external environment factors have a significant impact on the implementation process, namely a negative one when analyzing political and economical ones and a positive effect in the case of technological and cultural factors, thus partially confirming H1.

**Table 3:** External environment factors' impact analysis (N=112)

<b>External environment factors</b>	<b>Negative impact</b>	<b>Positive impact</b>
<b>Political factors</b>	82,1%	<b>12,5%</b>
<b>Economical factors</b>	58,9%	<b>39,3%</b>
<b>Technological factors</b>	<b>7,1%</b>	87,5%
<b>Cultural factors</b>	<b>25%</b>	62%

A detailed analysis of the perceived items' impact showed that in the case of political factors, 58,9% of the respondents appreciated *The complexity of the projects implementation' legal framework* as a major negative impact item, followed by the *Stability of the projects implementation' legal framework* – 53,6% and *Faulty governmental management of European funding sources* – 51,8%, while *The existence of support from local authorities or other public bodies in the implementing*

process is perceived as a minor negative impact factor by the majority of the respondents – 30,4%

For the economical factors, *Self-financing capacity of projects at the government level* and *Labor market characteristics* are perceived as major negative impact factors (by 44,6% and 32,1% of the respondents) on project implementation while 39,3% consider that *Self-financing capacity of projects at the institutional level* has a major positive impact.

Technological factors, namely *The partners' logistic capacity to support the project* (51,8%) and *Automation of operational procedures* (50%) are perceived as factors with a major positive impact and *The partners' quality of the technological / research infrastructure and informational system* is also a positive impact factor as appreciated by 35,7% of the analyzed population.

As for the cultural factors, three items are categorized as generators of major positive impact (*Stakeholders' attitude towards the possibility of completion of the project* – 37,5%; *The universities' perception within the economic and social environment and the community* – 35,7% and *Relations with the administrative system that manages European projects* – 33,9%) and two as negative ones, *Corruption in the institutions responsible of project implementation* – 44,6% with a major impact and *Stakeholders' attitude towards change* – 23,2% as a minor impact. These results partially confirm H2 since Cultural factors are perceived by our studied group to have a positive impact on the HRD projects' implementation process and H3 could not be validated by virtue of the factors' obtained type of impact.

## 5. Conclusions and discussions

As stated in the beginning, our research aimed at identifying the main factors from the external environment that affect a HRD project's implementation success. Throughout the paper, we underlined the necessity and the relevance of PESTC analysis in terms of strategic project management and operational project management, focusing on project's implementation process due to the current problems encountered. The research's results highlighted that Political and Economical factors have a major negative impact on the project's implementation process, as perceived by the public universities' staff.

Contrary to our arguments, based on other specific studies and observations, Cultural factors, as perceived by our sample, are shown to be of a positive impact upon the implementation process, results that indicate an optimistic approach as consequence of past success in developing and implementing such projects.

An unexpected outcome of our study was the exclusion due to reliability scores of the Social factors from the designed research model, aspect explained via our investigated sample's characteristics.

In terms of implications, our research sheds light on critical factors in HRD public projects and contributes to the current specific literature since it shows that there is a significant impact, albeit often negative, of external environment's factors and project implementation which ultimately should lead to project success. Also, as a practical implication, our study identifies the main factors that should be improved by policy decision making bodies in order to ensure a positive evolution of a HRD project (table 4).

**Table 4:** External environment factors' impact ranking

Negative impact factors		Positive impact factors	
1	The complexity of the projects implementation' legal framework	1	The partners' logistic capacity to support the project
2	Self-financing capacity of projects al the governmental level	2	Stakeholders' attitude towards the possibility of completion of the project
3	Corruption in the institutions responsible of project implementation	3	The universities' perception within the economic and social environment and the community

The limitations of our research arise from the relatively modest sample investigated, which might generate a low capacity to generalize the results but also from not taking into account project success measures.

Thus, our study opened opportunities for further research, such as analyzing the correlation between the factors identified and specific project success measures for HRD projects, widening the population investigated by including HRD projects' targeted group and their perception of the factor's impact and even determining the factor's importance according to project lifecycle.

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## **SOCIAL CRISIS – AN IMPEDIMENT TO SUSTAINABLE DEVELOPMENT**

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**Abstract:** *This paper is about social crisis and sets to give a dimension for this non-effective current. The paper is addressed to all persons interested in this domain, especially for those that work in this sector (non-governmental sector, third sector) and that need to have a better perspective on the situation. The methodology was based on self documentation which involved a wide range of materials: reports, case studies, paper works, articles, specific sites, European Union guides. This paper underlines the bad influence of the social crisis on sustainable development. My research includes both quantitative and qualitative dates; the ideas are embraced by my own convictions on the topic and tend to express also my beliefs on the matter. The added value of the paper is provided by the elements brought together: the topic, which, as common as can be, has a critical importance for the economy, blended with new information related to European Union Funds abortion and statistic dates regarding the work market in our country. The paper starts with an introduction that offers general information about the topic, a short background on the next headlines. As follows, each headline surprises with punctual elements of social crisis: determinant causes, solutions found, institutions involved, conclusions. The results of the paper shows that institutions in Romania are concerned about this situation and fight to bring out the best solutions, even if community is not totally prepared to accept it. Besides Romanian institutions, we have the support of the European Commission, through the European Union Funds. The Commission brings also the know-how of the other European Union Countries that confronted with these situations and, in better conditions know, sets here good practices within the projects they finance. This paper should be read and acknowledged as a base for the social economy development and it aims to create an interest for more persons in contributing to the strategic growth of the country and people.*

**Keywords:** social crisis; social exclusion; sustainable development; European Union

**JEL classification:** Z13; J14; J61; F22

### **1. Introduction**

The first question we're asking is how we define social crisis and, why it is so important to the economic growth and sustainable development.

We already know that global economic downturn has had negative social outcomes for individuals, families, communities and societies, and its impact on social progress in areas such as education and health will only become fully evident over time.

Once with the 80's, Romania has resented an impoverishment process of the people, more accentuated in the transition period, by the two crisis: 1991-1993 and 1997-2000.

'The socio-economic evolutions registered in the last years have led to the poverty level of 18.8% in 2001, and the extreme poverty rate level up to 5.9% in 2004. The drastically reduction of the number of work places, the diminishing of the real level of salaries and the tax wedge in particular on the low paid have represented important causes of incomes 'depreciation. The increase of the life costs in the 1997-2000, has not been proportionally accompanied by an income increase, which implicitly lead to severe poverty'. (Impacts of the international economic crisis in Romania 2009-2010:14).

As the crisis deepened, more and more people have shared the belief that the economic crisis has drastically deteriorated the country economic situation and their household's living conditions. In August 2010, more than 92% of population considered that the economic crisis hit seriously the Romania's economy and 84% declared that their households were 'much' or 'very much' affected.

In the period of financial and economic crisis, households often adopt coping strategies, such as making changes in household expenditure patterns; however, these negatively influenced education, health and nutrition outcomes, which may lead to lifelong deficits for the children affected and thus perpetuate the intergenerational transmission of poverty. Given the fragility of the economic recovery and the uneven progress in major economies, social conditions are expected to recover only slowly. The increased levels of poverty, hunger and unemployment will continue to affect billions of people for years to come.

It is essential that Governments take into account the likely social implications of the economic policies. It has been shown, time and again, that economic policies considered in isolation from their social outcomes can have dire consequences for poverty, employment, nutrition, health and education, which, in turn, adversely affect long-term sustainable development. The gap between economic policies and their social consequences can create a vicious circle of slow growth and poor social progress. Universal social protection systems and active employment generation programs should become permanent measures, not temporary components of national crisis response measures. The recession has also affected various social and economic groups in very different ways. In general, women have been disproportionately adversely affected, but in some economies, the adverse impacts on men have been more severe than on women. In other economies, less skilled workers, youth, older persons and migrant workers have suffered in terms of lost jobs, benefits and earnings.

Social crisis exists over time and it became more accentuated in the economic downturns. Usually it is associated to poverty, but the new policies at European level raised the importance of social economy to a higher level. Now, we talk about a protective society where women, children and old persons are starting to be taking care through special programs. It started to come to our attention that things thought to be part of the Romanian society such as family violence, women exploitation at work, the low esteem of women in society, migration of workers to western Europe, children abandoned, low level qualifications, all these are social crisis features. If we want to overpass the economic crisis we have to be aware of our internal social difficulties and to solve them. Poverty will not disappear by its self and Romania will not lose the poverty etiquette until we give priority to our people.

Lately defined, sustainable development appears as an horizontal objective of the European Union strategy for society development. According to SOP HRD's (Sectorial Operational Program Human Resources Development) co-financed by

European Union, the general goal for the society's sustainable development is to have people better prepared to face the present and the future challenges and to act responsibly for the next generations.

For this end, the initiatives to be taken must develop learning in all the fundamental areas, learning to know, learning to leave together, learning to do, learning to be and learning to transform oneself and society.

## **2. Social Crisis Key Elements**

The social crisis term is complex by itself; it expresses the weaknesses of a society. 'In 2008 the EU was hit by the worst global recession for decades. The impact of this major crisis on economic growth and unemployment was felt almost immediately. But the social impact of the crisis, feeding through more indirect channels, is only beginning to appear'. (Social Europe, 2011:37).

The key elements are: migration, unemployment, social exclusion. Each element has its own particularities and from it, we can expand even more. Even if these elements exist in every country, they start to differ once by the effect on society, economy and second, by the quick reaction they are being solved by the Government. The relationship between social crisis and sustainable development is much tied since one influences the other. If a society cannot overpass its social crisis by solving its own problems, we cannot talk about growth, development, and a healthy, strong, well prepared new generation.

### **2.1 Migration**

Workforce migration has major consequences on families: it reduces marriage and natality rates, as well as divorce rate. Migration influences also the relation between sexes; women that work abroad starts to get used with a good income, become more independent financial and not only. This experience gives them more safety and discretion. These are good parts, so why consider migration a weak point for social development?

People leave to work abroad first and foremost for money (for 'better incomes'), irrespective gender, age, education, marital status and number of children.

The majority of all migrants working abroad were married when they left Romania for the first time. More than a half of the married migrants, women and men, left children (0-18 years) at home. Nonetheless, 28-30% of the married migrants (with or without children at home) remarried (legally or consensual union) abroad.

The economic crisis has added negative financial effects to the existent damaging effects upon the family environment. Almost one in every three households with migrants abroad has experienced a fall in remittances. Thus, 10% of all childless households, 5% of the households with children and parents/relatives at home and 32% of the households with children/parents working abroad declared in August 2010 that the money received from overseas have decreased due to the crisis.

All data indicate that emigration for work abroad will not decrease in the future. Nor will a large number of migrants return in Romania at least not for many years from now. For example, only one recruiting platform ([www. Tjobs.ro](http://www.Tjobs.ro)) reported that in 2010, there were 592,183 online applications and 138 thousands working contracts abroad were concluded.

In January 2011, more than 64 thousands persons searched for work abroad through the same platform Emigration for work abroad from Romania is circular, which means that migrants alternate periods of working abroad with periods at home. The

highest rates of leaving Romania for the first time were recorded in 2005. Since 2006 the share of people leaving for work for the first time has continuously declined. Most returned migrants left Romania during the economic crisis in 2008-2009 when the demand for new workers was strongly declined. Thus, the migrants returned due to the crisis are predominantly among the migrants who left Romania for the first time later than those who succeeded to stay abroad.

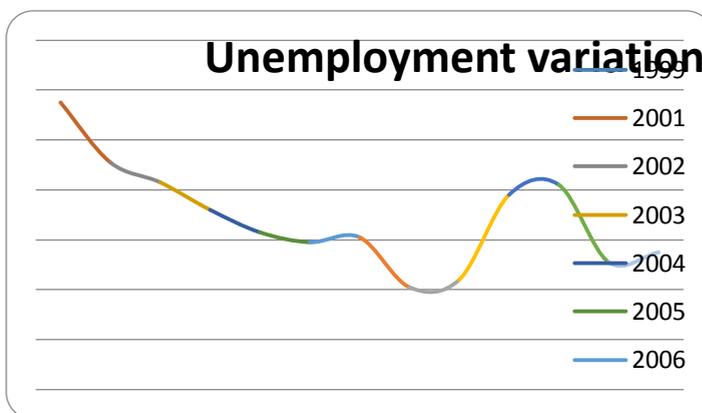
In multigenerational households, retired grandparents provide an important contribution to the household budget, particularly in the households of unemployed and of informal workers. On the other hand, grandparents are in charge with the domestic labour and the care for children.

Taking into consideration that a big part of migration consist in young women, we talk about the diminish of reproduction capacity which leads to a decrease of natality rage, Romania being classified one of the low rage natality country in Europe.

On the other hand the children left in the care of the relatives, of the grandparents, of the neighbors have originated a social problem regarding their care, supervising, frustration feelings or school abandon. If we take education as a national priority, then children raised by their grandparents don't live in a good situation in terms of authority, with less firm control, even if the affection and responsibility compensates a little. Still, a good education one that fits the requirements of a knowledge-based society and market economy is hard to reach when the new generation doesn't grow leded by new mentalities.

## 2.2 Unemployment

Unemployment is an element that becomes more visible once with a financial crisis. Unemployment is also the weak point that causes impoverishment. In our country starting with 2008, 2009 unemployment started to grow and rich the maximum level in 2010 with 8.2%. Nowadays, according to the statistics of the National Employment Agency, we see improvements, in 2012 the unemployment rate decreased to 5.5.



**Figure 1:** Unemployment variation  
Source: National Agency for Unemployment

Unemployment is different determined at rural and urban area. In urban area, finding a job can be easier due to the fact that persons are more bound to use technology, have better skills or education, similar experience, they are more open minded and

easier to access a location. In rural areas the interest in finding and also maintain a job is lower since persons prefer or choose to live from subsistence agriculture.

Here we face another resistance in the sustainable development, that of persons not wanting to grow, to contribute to the development of the society. For the development of skills, qualification and self-esteem we have the European Social Fund (ESF). ESF projects in Romania give people the jobs and skills they need to benefit from the modernization of the economy and the new job openings this brings.

They are also helping build a fairer society with training and job opportunities open to all citizens, including the most vulnerable. Nationwide, the ESF is supporting information campaigns to encourage people to take up vocational training opportunities and lifelong learning. And the ESF is helping public employment services to become more proactive and offer better services to job-seekers.

Quality management systems are being installed in municipalities and training in customer service techniques is being delivered. In rural areas, one-stop shops to deliver a range of public services more efficiently are helping job-seekers and citizens in more isolated communities.

The results of these actions are reflected in numbers. Romania is situated lately, among the countries that have the smallest unemployment rate. Unfortunately this is not enough to cover the other causes of the social crisis and poverty.

### **2.3 Social Exclusion**

The European Union published within its 2004 Joint report the following definition of social exclusion: 'Social exclusion is a process whereby certain individuals are pushed to the edge of society and prevented from participating fully by virtue of their poverty, or lack of basic competencies and lifelong learning opportunities, or as a result of discrimination. This distances them from job, income and education opportunities, as well as social and community networks and activities. They have little access to power and decision-making bodies and thus often feeling powerless and unable to take control over the decisions that affect their day today lives'.

Social exclusion is equal to disadvantaged persons through gender, religion, social layers, nationality, education, working skills and handicap. In order to reinforce social inclusion Romanians need to accept and embrace these differences, which unite us in the end, to militate for equality of chances and opportunities for all the persons.

The Government already took measures, by introducing laws that promotes hiring persons with disabilities. European Union through its funds encourages companies to hire women and gives importance to creating social enterprises, training and counseling for the disadvantaged persons, in order for them to find better and more suitable jobs. The violence in the family is a subject that remains unsolved yet, in terms that law exists, but without a good methodology in applying it.

European Union comes again with funds for projects that offer counseling to women involved in domestic violence, on how to solve this situation, for teenagers involved with drugs, in convicted to reintegrate in society and for other groups affected by the misconception or misjudgment, in order to eliminate the low esteem ideas and frustration. A person that doesn't trust its own abilities is incapable to overpass its statute of social excluded and forms a vicious circle that leads to a society denaturation. It is not enough for the inside or outside institutions to interfere in their development and support, if the entire nation doesn't change mentality, doesn't accept them, doesn't encourage them for the qualities they have, for what they have to offer. It is not only one example that reaches our knowledge when it comes to

disadvantages persons that proof to be more human, or more gifted than any other person that never confronted with social exclusion.

### **3. Old Generation vs. New Generation**

Old generation vs. new generation or generation x vs. generation y. Nowadays we confront with knowledge-based society, very difficult to be kept up by the old generation. Even so, what is the relation with the sustainable development and social crisis? As mentioned before, society splits in persons that have access and support to technology and advanced knowledge and persons that tries to keep up to this changes. If sustainable development means among other growth, development and to act responsible for the next generation, this means that in order to contribute to a better society we have to analyze deeper the gaps between generations.

Let's take the example of children that should have access to the some information and technology. Sill, because of migration of their parents, or the fact they live in rural areas, they don't have access to the same support and guidance. In this way, raised by grandparents or in schools that are not properly equipped, they reach college (for those that don't abandon school earlier) with a handicap of knowledge that is very hard to repair.

This gap leads to frustration and low self-esteem that aggravates even more the initial situation. In terms of finding a job, it is very likely for an inexperienced person to find a job quicker that an elder one with the advantage of new society requirements: handling IT&C (Information, Technology and Communication) equipment and foreign languages.

If it seems that generation X is a cause of social exclusion, let's take a look on the other side, the lake of specialist prepared to take care of the old persons. It is a custom lately to immigrate in Western Europe in order to work in this domain, for better incomes, without special diplomas, instead of paying attention to our elder persons that are in needed for these services. Likely for us, European Union finances projects for creating elderly homes and also for training persons in becoming elderly caregiver. There is still interested in this domain since the co-financed lines were closed a few after opening, because of the big number of projects submitted and budget exhaustion.

### **4. Solutions to Social Crisis – Actions and Results**

European Commission has decided to create a fund to help the most disadvantaged persons in European Union The fund will support the member states systems of providing food for the most disadvantaged persons and clothes and other goods for the homeless persons and material deprived children. There will be allocated 2.5 billion euros, for the period 2014-2020, at European level. In Romania, the program had encountered a few difficulties. In Bucharest, for example, only 30% of the persons received the 12 foodstuff, public authorities justifying the difficulties in supplying some of the foodstuff.

The city halls, through social protection departments, started to distribute starting 5<sup>th</sup> of November 2012 the welfare from intervention stocks, for the most disadvantaged persons in Romania, but the list of foods sometimes still lacking some products. It is also thought, that the lack of organization or the stiling of goods would be another reason for this community program not to work as planned.

One of the main characteristics of material deprivation is the incapacity to have access to adequate quantitative and qualitative food. The proportion of the EU

population who cannot afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day – which is a base need according to Health World Organization – was 8.7% in 2010, meaning over 43 mil persons. The first numbers for 2011 shows a worst perspective.

If this was a solution to social crisis, another solution is given by the European Union funds through the ESF (European Social Funds). The European Union is committed to creating more and better jobs and a socially inclusive society. These goals are at the core of the Europe 2020 strategy for generating smart, sustainable and inclusive growth in the EU. The current economic crisis is making this an even more demanding challenge. The ESF is playing an important role in meeting Europe's goals, and in mitigating the consequences of the economic crisis – especially the rise in unemployment and poverty levels.

One financing line, 6.1 Social economy is addressed strictly to disadvantaged persons with the scope of social inclusion. For the projects submitted in 2009, the implementation started in 2010-2011, results started to be seen in 2012 through activities such as social enterprises created, training delivered for vulnerable persons. In terms of statistics is very hard to find real numbers, regarding these projects, even if it is in terms of number of projects or results. We only hear about the poor absorption of funds but less about results. In 2011 the 6.1 line opened again, this time it was known that the number of projects submitted in the first day overpassed 2000. The answer received is that all projects were cancelled. In 2013, the ESF program is announcing that the line may open again. It is a good practice but unfortunately in the same spirit of uncertainty. This would have been a good solution to social crisis waiting to find space in the local strategy.

## **5. Conclusions**

In conclusion, our actions influence next generation and the growth of our society. Therefore it is a must to embrace the new policies and think forward for actions more complex and more suitable to our needs. This means helping each other to eliminate social exclusion actions, all generations to mix together and learn from each other, creating jobs, and encouraging persons to be more opened to the new solutions there are provided.

The economic crisis has served as a reminder that it is essential for people to be healthy, educated, adequately housed and well fed to be more productive and better able to contribute to society. In other words, social policy in general, as well as measures to end poverty in all its dimensions, should be an integral part of macroeconomic policy to promote development. Approaches to poverty reduction should, therefore, be developmental and holistic, integrating economic and social policies to achieve people-centered development outcomes.

Risk of poverty or social exclusion rises to 46 percent in Romania, due to population decline to 19 million people, the highest in the entire European Union, in all age groups, results from a study presented by Bloc National Sindical (BNS).

The economic crisis led to job loss, but also to an increase of work overtime for fear of not losing job. Consequently, in many households, children are exposed either to risk-of-poverty associated with parents' job loss or to reduction of the quality time with parents.

According to the recruitment site Myjob, over 86 percent of Romanians would leave to work abroad if they had a chance. Besides the nearly 2 million Romanians who have already left the country, more than 400,000 Romanians applied from January

to June 2010 for a job abroad. Given the austerity measures implemented by the government this summer, the number of those fleeing the country will invariably reach new peaks this year.

Much of the media focus in recent years has been on 'the new poor'. While it is undoubtedly true that many people who previously believed themselves to be secure are now falling into poverty, many of those who have been worst hit come from distinct vulnerable groups – in particular, people already experiencing poverty before the crisis, young people, people who are educationally disadvantaged, migrants and ethnic minorities, older people, children and lone parents.

Alternatives to the present approach are possible, but need to build and fought for through new alliances. The immediate solutions for social crisis would be:

- A pro-active social impact assessment on the causes and consequences of the crisis;
- Alternative exit strategies, which reduce deficits more slowly and invest in recovery, boost demand and include a commitment to a social model which offers adequate protection and equality of opportunity;
- A comprehensive rethink of the development model which has predominated in recent decades, with a view to devising an alternative that will allow for the hope of building a better life for all.

Social crisis has to be the first point to be solved for the next years for the good health of the population, for the economic growth but mostly for the sustainable development.

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# REGIONAL DEVELOPMENT AND INNOVATION IN ROMANIA. CHALLENGES AND PERSPECTIVES

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**Abstract:** *Regional innovation is considered one of the most important drivers of development at present. Innovation is the tool that can help regions develop regardless of their natural resources and potential. The main purpose of the paper is to foster the innovation at regional level in Romania in order to determine and highlight the need of further measures to increase regional innovation and regional development of Romanian regions in the current context of getting out of the economic crises. Romania is subject of discrepancies not only at European level but at national level as well in terms of economic development and regional innovation. The research undertaken in the present paper is a qualitative research and follows the model proposed by the Group of Applied Economics in the study called Manual of regional competitiveness assessment, and in the study called Romania's reindustrialization: policy and strategy, study commissioned by the Ministry of Economy, Trade and Business, and uses regional indicators of the eight Romanian development regions in order to measure the Competitiveness Index based on three Indexes, namely Economic, Social and Innovation Index. The data used was collected from Romania's National Institute of Statistic, National Centre of Prognosis and from the Eurostat database. The general objective is to enhance the great role of regional level in innovation and to sensitize the policy makers about the need to introduce a regional level in order to enforce regional innovation, the main way of improving regional competitiveness and regional development. The main findings reveal that the Romanian regions that invested more in innovation have a positive evolution in terms of economic growth over time so it is for the best of a region to invest in innovation, an aspect that should be taken into consideration by policy makers and private sector when planning the investments within a region.*

**Keywords:** *Innovation index, Economic index, regional innovation, regional development, regional competitiveness.*

**JEL classification:** *P25, R11, R58.*

## 1. Introduction

Regional innovation is considered one of the most important drivers of development at present. Innovation is the mean through which regions can develop and become more competitive regardless of their natural resources and potential.

Innovation is the solution for some important global challenges as the climate change, the need to limit fossil fuel energy consumption and global economic crisis (Cooke et al., 2011). Even more, there are authors who consider innovation the engine of economic growth (Asheim and Gertler, 2005), who argue that in order to

create a proper socio-economic framework for innovation development regional level has been given great importance.

The concept of innovative regions has been increasingly associated with the so-called knowledge region, a concept specific to the 'New Economy', based on two approaches: the first one is that knowledge emphasizes business competitiveness and the second one considers region as a platform for interaction that encourages accumulation of knowledge (Asheim, B., Cooke, P., Martin, R., 2006; M., Perry, 2010).

In order to enhance the actual position of Romania in terms of regional innovation and economic development, we should bear in mind that at present, in terms of economic development and regional innovation, Romania is subject of regional discrepancies at both European and national level. For example, in terms of economic discrepancies, in 2007 the Bucharest-Ilfov region, the region that contains the capital city, registered a GDP/capita almost 4 times higher than North-East region, the poorest at the moment (according to Romanian National Institute of Statistics). However, after 2007, when Romania joined the European Union, started a process of catching-up but it was hindered by the global economic crisis felt in Romania at the end of 2008. How innovative are the Romanian regions? and How does this influence the regional economic development? are the main questions that the paper tries to answer.

## 2. Methodology

In order to reveal the link between innovation and economic development of the Romanian regions have been investigated the Innovation Index and the Economic Index of Romanian regions in comparison in 2007 and 2011 and their evolution in the period.

The methodology used was proposed by the Group of Applied Economics in the study called Manual of regional competitiveness assessment (2007), and the study Romania's reindustrialization: policy and strategy (2010), study commissioned by the Ministry of Economy, Trade and Business, that uses regional indicators of the eight Romanian development regions such as: growth rate, GDP, net income per capita, percentage of research and development expenditure in total GDP, number of employees in the high technology sector and so on.

The qualitative research undertaken uses data collected from The National Institute of Statistic of Romania, The National Centre of Prognosis and from the Eurostat database.

The model of evaluation selects a set of indicators for the two directions, which it aggregates, by calculating a weighted average, as we can see in Table 1 and Table 2.

### 2.1. Indicators used for the identification of the Economic Index at regional level

**Table 1: The Economic Index**

Index		Weight
Economic Index (E)		

	E <sub>1</sub> GDP/capita	10%
	E <sub>2</sub> GDP growth rate	10%
	E <sub>3</sub> Labor productivity	30%
	E <sub>4</sub> Net exports	10%
	E <sub>5</sub> Gross fixed capital formation (% of GDP)	20%
	E <sub>6</sub> Net income per capita	20%
<b>Economic Index = 10%* E1+10%* E2+30% E3+10%* E4+20%* E5 +20%* E6</b>		

Source: GEA (2007) - Manual of regional competitiveness assessment, [on-line], [http://www.gea.org.ro/documente/ro/proiecte/manual\\_2007.pdf](http://www.gea.org.ro/documente/ro/proiecte/manual_2007.pdf), accessed on 21.08.2011, p.37;

The aggregate Economic Index weights of each component (according to Table 1) are: GDP per capita - 10%, GDP growth rate - 10%, net exports - 10%, labor productivity - 30%, gross fixed capital formation (% of GDP) - 20%, respectively net income per capita - 20%. Gross fixed capital formation (% of GDP) is not available in national statistics development at regional level; therefore, this lack will be taken into account in the calculation of aggregate economic index.

**Table 2: The Innovation Index**

Index		Weight
<b>Innovation Index (I<sub>i</sub>)</b>		
	I <sub>1</sub> R&D Expenditure (% of GDP)	40%
	I <sub>2</sub> Employment in high technology sectors	30%
	I <sub>3</sub> Tertiary education specializing in advanced research	30%
<b>Innovation Index = 40%* I<sub>1</sub>+30%* I<sub>2</sub>+30%* I<sub>3</sub></b>		

Source: GEA (2007) - Manual of regional competitiveness assessment, [on-line], [http://www.gea.org.ro/documente/ro/proiecte/manual\\_2007.pdf](http://www.gea.org.ro/documente/ro/proiecte/manual_2007.pdf), accessed on 21.08.2011, p.37;

The distribution of the weights between Innovation Index's components are: R & D Expenditure (% of GDP), accounts for 40%, and Employment in High Technology Sectors as well as Tertiary education specializing in advanced research, that have a weight equal to 30% each, with the observation that for this indicator could be found all sizes.

### 3. The regional economic development of Romania

Like other Eastern European countries, Romania has experienced in the last 20 years a process of deindustrialization. At national level, according to the data revealed by the National Institute of Statistics, there are relatively low inter-regional disparities compared to the other EU countries. Even so, we notice deepening trends of disparities in terms of GDP/capita between the region containing the capital city and the other regions, the centre-periphery model of development being felt in Romania as well.

There is a general trend of increasing regional disparities regarding employment, industrial production, investments and income between West-and East and from centre to periphery.

**Table 3: Regional Economic Index in 2007, compared to 2011**

Region	2007	Rank 2007	2011	Rank 2011	Change in Index score 2007-2011
North - East	0.697959	8	0.708029794	7	1,01 %
South - East	0.813539	6	0.845112988	5	3,16 %
South	0.859075	5	0.845318965	4	-1,38 %
South West	0.737657	7	0.698468193	8	-3,92 %
West	0.899428	3	0.880285436	3	-1,91 %
North - West	0.884216	4	0.830732309	6	-5,35 %
Centre	0.963781	2	0.899453286	2	-6,43 %
Bucharest - Ilfov	2.169459	1	2.319737587	1	15,03 %

Source: author's calculation, using Eurostat database

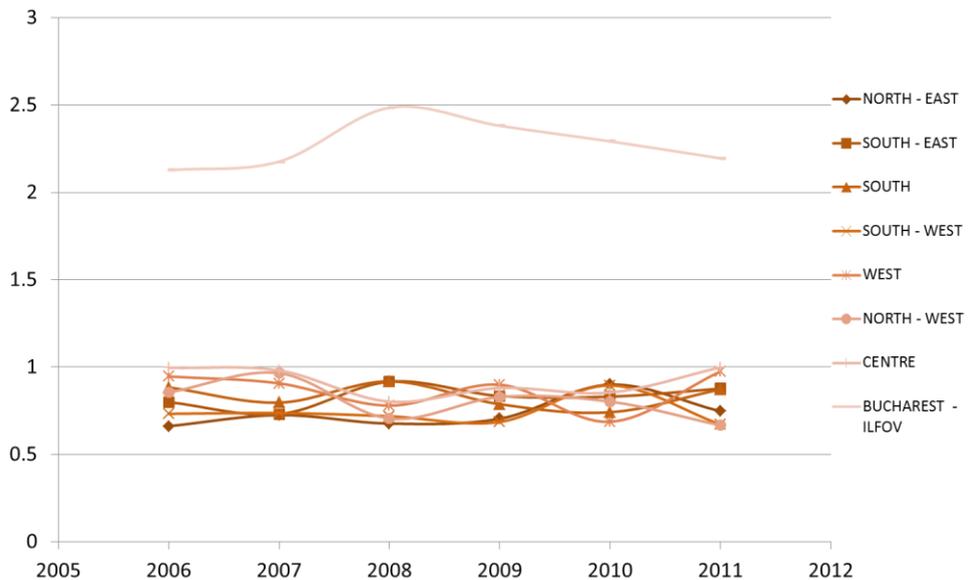


Figure 1: Evolution of Economic Index from 2006-2011

Source: author's calculation, using The Romanian National Commission of Forecasting database.

As Table 3 and Figure 1 reveal, Romanian regions were affected by the crisis and most of them registered a decrease in terms of economic development in 2011 towards 2007.

There were only three regions that managed to increase their economic indicators, namely Bucharest – Ilfov, South-East and North-East. The worst affected regions by the economic crisis were Centre region, followed by North-West and South West. The highest level registered by the Economic Index was registered in Bucharest-Ilfov region in 2008, but after 2008 the general trend is of decrease.

The highest levels of Economic Index are registered in the region containing the capital city (Bucharest - Ilfov) and in the regions situated in the West and Centre of the country, revealing a West-East and centre-periphery pattern of economic development. We notice a general trend of reducing discrepancies between West and East, because while the Economic Index of the regions situated in the Eastern part of Romania increased, the Economic Index of the regions situated in the Western part of Romania decreased, meaning we are facing a convergence tendency regarding Economic Index between Romanian regions except from Bucharest-Ilfov region, that keeps its growing tendency.

#### 4. Regional innovation in Romania

According to the Innovation Union Scoreboard for 2011 (IUS), Romania is one of the modest innovators with a below average performance. However, Romania recorded an average growth of innovation of 5% (IUS, 2011), being one of the catching-up leaders, but the process is slowing down.

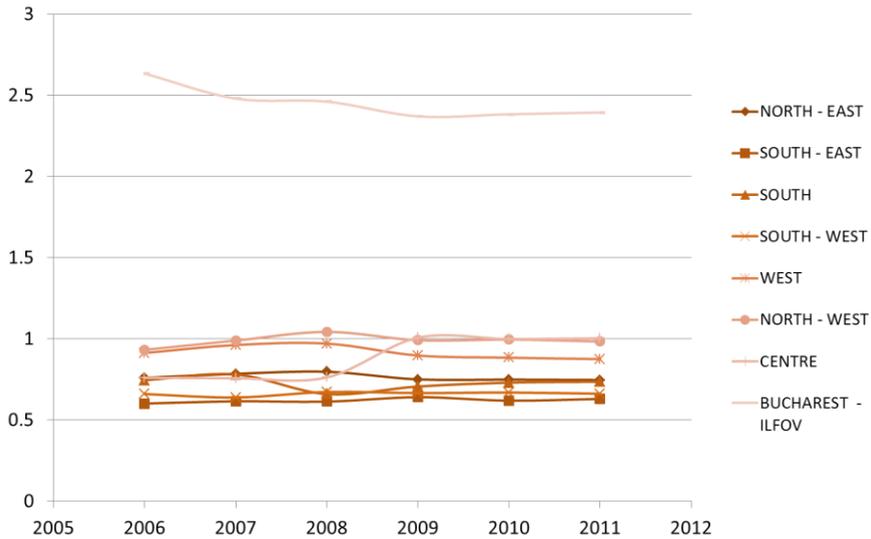
Even though according to data revealed by the National Institute of Statistics (NIS), from 2002 to 2008 the share of innovative enterprises raised constantly in the number of total enterprises, from 17% to 33%, our percentage is still very modest compared to other European countries.

Romania has serious problems in attractiveness of research systems, aspect revealed by several indicators: negative share of Non-EU doctorate students, firms do not invest in R&D, there are no innovative SMEs collaborating to others, we do not have PCT patents applications, etc.

Table 4: Regional Innovation Index in 2007 compared to 2011

Region	2007	Rank 2007	2011	Rank 2011	Change in Index score 2007-2011
North - East	0.688987369	5	0.639773243	6	-4.92%
South - East	0.508377613	8	0.510113379	8	0.17%
South	0.731411115	4	0.622063492	7	-10.93%
South West	0.543336237	7	0.685192744	5	14.19%
West	1.227587108	2	1.041428571	2	-18.62%
North West	0.920017422	3	0.948185941	4	2.82%
Centre	0.683930749	6	0.959863946	3	27.59%
Bucharest - Ilfov	2.721620209	1	2.640498866	1	-8.11%

Source: author's calculation, using Eurostat database.



**Figure 2:** Evolution of Innovation Index from 2006-2011

Source: author's calculation, using Eurostat database.

As we notice from Table 4 and Figure 2, the most developed and innovative region of Romania is Bucharest-Ilfov, mainly because there is a tendency of entrepreneurs to locate in the economic, social and politic centre of the country. On the second place in terms of innovation is situated the West region, placed at the western border of the country, its attractiveness being explained on the fact that it has a more easy access to foreign technology.

The Centre region registered an increase of investment in R&D from 2007 to 2011 and managed to surpass North West and South West regions.

The general trend reveals that the most innovative regions of Romania are situated in the western part of the country and the least innovative in the eastern part. There is also noticed a tendency to reduce the discrepancies between West and East, as the Innovation Index decreased in the central and western regions while the Innovation Index of southern and eastern regions increased.

## 5. Comparative analysis of Economic and Innovation Index in 2007 and 2011

Table 5: Comparative analysis of Economic and Innovation Index in 2007 and 2011 (1)

Region	Rank in 2007		Rank in 2011	
	Innovation Index	Economic Index	Innovation Index	Economic Index
North - East	5	8	6	7
South - East	8	6	8	5
South	4	5	7	4
South - West	7	7	5	8

West	2	3	2	3
North - West	3	4	4	6
Centre	6	2	3	2
Bucharest - Ilfov	1	1	1	1

Source: author's calculation based on Table 3 and Table 4.

Table 6: Comparative analysis of Economic and Innovation Index in 2007 and 2011 (2)

Region	Evolution of Rank in 2011 comparing with Rank in 2007	
	Innovation Index	Economic Index
North - East	-	+
South - East	0	+
South	- - -	+
South - West	+ +	-
West	0	0
North - West	-	- -
Centre	+ + +	0
Bucharest - Ilfov	0	0

Source: author's calculation based on Table 5.

In order to better observe the impact of innovation on economic development were created comparative Tables, Table 5 and Table 6, that show the evolution of the regions in terms of economic and innovation Index from 2007 to 2011.

The most spectacular evolution was registered by Center region (3 pluses in Innovation rank, 0 in Economic rank) and South region (3 minuses in Innovation rank, plus 1 in Economic rank).

An accelerated increase/decrease of indexes were registered by South-West region (2 pluses in Innovation rank, 1 minus in Economic rank) and North-West region (1 minus in Innovation rank, 2 minuses in Economic rank).

A moderate increase/decrease registered North-East region (1 minus in Innovation rank, 1 plus in Economic rank) while a constant situation registered Bucharest-Ilfov and West region (0 both in Innovation and Economic rank) and South-East region (0 in Innovation rank and 1 plus in Economic rank).

The main findings reveal that the first region in terms of innovation and economic development in 2007 and 2011 is Bucharest-Ilfov region, the region containing the capital city of Romania, that confirms the general trend existing in EU regarding innovation and economic development in capital regions and the regions situated in the Western and in Centre parts of Romania tend to invest more in innovation and tend to be wealthier than those situated in the eastern part or at the periphery of the country, that confirms again the general trend existing in EU regarding central-peripheral type of regional structure and the acceleration of the innovation and economic development direction from West to East.

## **6. Conclusions and proposals**

The regional level plays an important role in evolution of a nation's innovation and economic development and therefore it is important for Romania to increase its investment in innovation with a focus on regions.

The Romanian regions that invested more in innovation had a positive evolution in terms of economic growth over time, aspect that should encourage decision and policy makers to stimulate innovation at regional level.

There has been identified a pattern of investing in innovation from West to East and from centre to periphery, the same pattern being identified for economic development. Bucharest-Ifov is the first region in terms of economic development and innovativeness and it is followed by a contingent of other seven relatively homogeneous regions between which the differences are not very high.

The effort of increasing innovation should be coordinated at regional level, each region being specialized in a certain field, working in partnership with universities and research centers in the area.

We consider that the private sector should invest more in innovation in order to increase its economic performance, a phenomenon that would determine the increase of the regional economic development as well. The long-term effect of investing in R&D, in creating jobs in high technology sectors and also supporting tertiary education for specialisation in advanced research brings economic development and regional welfare, a welfare that spreads from the firm to the employees whose wages increase, to the local economy and finally to the regional level. It is the case of South and North-East regions, that through investing in innovation and having a good position in 2007 in Innovation Rank, managed to gain a better position in terms of Economic Index in 2011.

The great challenge for decision makers at regional level is to be able to offer facilities for entrepreneurs to encourage them invest in R&D and create workplaces in the sector. In addition to creating industrial parks and knowledge centres the decision makers should focus on communication and partnership at regional level between universities, private actors, interest and lobby groups and civil society, partnership that must be based on trust and lead to information and knowledge exchange that could increase the economic results for both private and public actors and for the region as a whole.

## **7. Acknowledgements**

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# COMPARATIVE ANALYSIS OF RURAL DEVELOPMENT POLICY 2007-2013 IN ESTONIA, LATVIA AND LITHUANIA

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**Abstract:** *In this article will be carried out an analysis of the manner in which the three Baltic countries were able to implement rural development Policy at EU level. For rural development policy at EU level through EAFDR was allocated a budget of 96,3 billion € for the period 2007-2013. The total amount of funds for the three countries compared in this article is 3,54 billion €. The article begins with a comparative study on some characteristics of the national economy and the agricultural sector, such as population, GDP, GDP per capita, the total area, the area used for agriculture, the number of farms, number of persons engaged in agriculture, the importance of agriculture to the economies of those countries, will continue with the presentation of the amount of funds allocated for each axis and measure in the rural development programmes for the period 2007-2013 and another chapter will refer to the degree of access of funds from the EAFRD and shall end with a number of conclusions concerning the capacity of States to access EU funds. The three countries have experience in implementing EU funds considering that benefited from rural Development Plans in 2004-2006 and SAPARD. The main objective of this paper is to identify the amount and degree of accessing funds from EU rural development in Estonia, Latvia and Lithuania in the year 2012. The Estonian Rural Development Plan 2007–2013, Rural Development Programme for Latvia 2007–2013 and Rural Development Programme for Lithuania 2007 – 2013 cover the entire territory of these three states which is under convergence region. The data sources used in this article are from official statistical institutions such as Eurostat (European Commission), Central Statistical Bureau of Latvia, The Lithuanian Department of Statistics, Official Statistics Portal and Statistics Estonia.*

**Keywords:** agriculture, axes, EAFDR, measure, rural development

*JEL classification: Q18, R11, R58*

## 1. Introduction

The Republic of Estonia, the Republic of Latvia and the Republic of Lithuania are part of the Baltic States located on the eastern shores of the Baltic Sea and are members of the European Union since 2004.

The three countries have experience in implementing EU funds considering that benefited from the following programs in 2004-2006:

- in Estonia were prepared and implemented two strategic programming documents: the Estonian Rural Development Plan 2004-2006 (ERDP 2004 - 2006) financed from the European Agricultural Guidance and Guarantee Fund (EAGGF), Guarantee Section and the Estonian National Development Plan 2004-2006 (ENDP 2004 -2006) financed from the Financial Instrument

for Fisheries Guidance (FIG), the EAGGF Guidance Section, and the European Regional Development Fund (the ERDF) (technical assistance for the development plan) ;

- in Latvia have been implemented two programs: Single Programming Document and Rural Development Plan 2004–2006;
- in Lithuania were implemented 3 different programmes, Single Programming Document (SPD), Rural Development Plan (RDP) and Special Rural Support Programme (SRSP) which is funded nationally.

The Estonian Rural Development Plan 2007–2013, Rural Development Programme for Latvia 2007–2013 and Rural Development Programme for Lithuania 2007 – 2013 cover the period from 1 January 2007 to the end of 2013 and have been prepared following the provisions of the Council Regulation EC No 1698/2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD). These programs cover the whole geographical territory of Estonia, Latvia, Republic of Lithuania and the entire territory of these three states is regarded as a convergence region, which means that in all administrative units of the NUTS second level, the GDP is below 75% of the EU average.

## **2. Data used for the analysis**

For achieving this article have been used data from the official statistical institutions such as Eurostat (European Commission), Central Statistical Bureau of Latvia, The Lithuanian Department of Statistics, Official Statistics Portal, Statistics Estonia. There were used information from national development programs of the three states and Rural Development in the European Union - Statistical and economic information - 2012. These data have been analyzed, processed and interpreted in order to observe the importance of the agriculture and rural development in a comparative approach between Estonia, Latvia, Lithuania and the European Union, the funds allocated to these countries and level of accessing funds from the EAFRD to the year 2012.

## **3. Information about the economy and agriculture of Estonia, Latvia and Lithuania**

The total area of Estonia is 45.227 km<sup>2</sup>, including 43.200 km<sup>2</sup> of land area. More than a half of the land area is forest land, one third is agricultural land, and one fifth is covered by mires and bogs. Estonia is one of the smallest countries in Europe, both by area and by population. Of the EU-27 countries, only Cyprus, Malta and Luxembourg have smaller size of population. Belgium, Luxembourg, the Netherlands, Denmark Cyprus, Malta and Slovenia have smaller territory than Estonia.(Estonian Rural Development Plan 2007–2013, Ministry of Agriculture, 2008)

The total surface area of Lithuania is 65.3 thousand sq. km. Lithuanian population is 3 million in 2012.

Latvia occupies a territory of 64 589 km<sup>2</sup>, of which the inland waters take up 2543 km<sup>2</sup> and dry land 62 046 km<sup>2</sup>, including agricultural land 24 710 km<sup>2</sup>, forest 29 503 km<sup>2</sup>; the total protected area is 10 523 km<sup>2</sup>.(Rural Development Programme for Latvia 2007–2013, Ministry of Agriculture, 2011)

In the following will be performed a short comparison of economy and agriculture of the three states based on various criteria and indicators such as population, GDP,

GDP per capita, the total area, area used in agriculture, the number of farms the number of people working in agriculture.

**Table 1.** Data relating to the economy and agriculture of Estonia, Latvia and Lithuania

Country	Estonia	Latvia	Lithuania	EU (27 countries)
<b>Criteria</b>				
GDP – Current Prices (Millions of euro) (2012)	16.998,2	22.258	32.781,8	12.899.149,5
Population (2012)	1.339.662	2.041.763	3.007.758	503.663.601
Gross domestic product (GDP) at current market prices (Euro per inhabitant) (2012)	12.688,42	10.901,36	10.899,08	25.610,64
Agricultural Labour Input Statistics: absolute figures (1 000 annual work units) (2012)	24,6	80,1	141,5	10.134,7
Share of Agricultural Labour Input in total population	1,84%	3,92%	4,70%	2,01%
The total area (km <sup>2</sup> ) (2010)	45.227	64.589	65.300	-
Utilised agricultural area in farms (km <sup>2</sup> ) (2010)	9.409,3	17.962,9	27.425,6	-
Share of utilized agricultural area in total area farms	20,80%	27,81%	42,00%	-
Total number of holdings (2010)	19.610	83.390	199.910	-

Source: Author processing data from Eurostat, European Commission

Lithuania is the largest country in the group of the three Baltic countries with an area of 65.300 km<sup>2</sup>. With an similar area is Latvia and Estonia is the country with the smallest area (45.227 km<sup>2</sup>). Regarding agricultural area where Estonia has the smallest percentage of area used in agriculture (20.8% in total) with a total area of 9409 km<sup>2</sup>, in Latvia are used for agriculture 179.620 hectares and area used for agriculture in Lithuania is 27.425 km<sup>2</sup> representing 42% of all area.

After analyzing data from the Eurostat, it can be seen that the country's GDP registered the highest value is Lithuania (32.781,8 millions of euro). Lithuania has also the highest number of population. However, the highest value of the GDP per inhabitant it can be observed for Estonia (12.688 euro / person). In all 3 person a notice in Estonia (12,688 euros / person). In all three neighboring countries value of the indicator is approximately equal to or less than half the average of the EU countries where this indicator takes the value of 25.610 euro in 2012.

Regarding the number of people working in agriculture in Lithuania is recorded the highest number of people working in the sector (141.500 people representing 4.7% of the total population of the country). Reported at EU level, all persons engaged in agriculture in the three countries is only 246.200 which represents 2.4% of total persons employed in agriculture in the EU.

Fewest farms are observed in Estonia (19.610), in Latvia are 83.390 holdings and Lithuania has the most holdings (199.910).

#### **4. The amount of funds allocated for 2007-2013 from the EAFRD for Estonia, Latvia and Lithuania**

For rural development policy at EU level, through EAFDR was allocated a budget of 96.3 billion euro for the period 2007-2013. The total amount of funds for the three countries compared in this article is 3.543.905.000 euro, allocated as follows:

Estonia have funds amounting to 723.737.000 euro, Latvia (1.054.374.000 €) and Lithuania received 1.765.794.000 euro.

The diversified level of agricultural development and directions of evolution of rural areas in the individual EU countries results in complex and diversified problems for the agricultural policy. That was a basic reason of giving a relatively great freedom to the individual member states to choose measures within the individual axes of the Rural Development Programmes. The allocation of expenses to the individual measures Member States should ensure that synergies among the economic, environmental and social aspects and, by assumption, it is supposed to reflect the priorities of rural development. The analysis of the allocation of expenses within the national rural development programmes will indicate similarities and differences of the use of the CAP support in the regional aspect. (Sadowski, A., Czubak, W., 2013)

**Table 2.** The amount of funds allocated for 2007-2013 through EAFRD for Estonia, Latvia and Lithuania

Axes/ Measures*	Estonia 000 €	Estonia % axis	Latvia 000 €	Latvia % axis	Lithuania 000 €	Lithuania % axis
111	3.200	1.21%	893	0.23%	20.008	2.67%
112	13.174	4.99%	11.014	2.78%	64.063	8.53%
113	0	0.00%	21.375	5.39%	101.497	13.52%
114	2.976	1.13%	6	0.00%	5.593	0.75%
121	147.038	55.69%	243.351	61.41%	330.321	44.00%
122	15.506	5.87%	14.395	3.63%	11.031	1.47%
123	32.122	12.17%	53.581	13.52%	113.220	15.08%
124	9.299	3.52%	0	0.00%	0	0.00%
125	31.374	11.88%	25.556	6.45%	81.913	10.91%
131	959	0.36%	5.602	1.41%	0	0.00%
132	0	0.00%	0	0.00%	1.710	0.23%
141	3.150	1.19%	19.454	4.91%	21.331	2.84%
142	5.236	1.98%	1.019	0.26%	0	0.00%
Total Axis 1	264.034	36.48%	396.245	37.58%	750.686	42.51%
212	42.811	16.00%	185.770	45.23%	245.846	38.29%
213	6.922	2.59%	10.303	2.51%	1.598	0.25%
214	168.710	63.05%	180.055	43.84%	277.035	43.15%
215	17.379	6.50%	0	0.00%	0	0.00%
216	3.170	1.18%	0	0.00%	4.640	0.72%
221	3.425	1.28%	0	0.00%	44.372	6.91%
223	0	0.00%	15.850	3.86%	43.999	6.85%
224	25.151	9.40%	12.058	2.94%	2.318	0.36%
225	0	0.00%	0	0.00%	2.208	0.34%
226	0	0.00%	6.693	1.63%	12.000	1.87%
227	0	0.00%	0	0.00%	8.000	1.25%
Total Axis 2	267.568	36.97%	410.729	38.95%	642.014	36.36%
311	0	0.00%	0	0.00%	24.458	12.38%
312	53.514	56.37%	97.551	54.92%	88.494	44.81%
313	0	0.00%	8.797	4.95%	35.065	17.75%
321	0	0.00%	69.955	39.38%	0	0.00%
322	41.428	43.63%	0	0.00%	49.492	25.06%
323	0	0.00%	1.317	0.74%	0	0.00%
Total Axis 3	94.941	13.12%	177.620	16.85%	197.508	11.19%
411	10.566	15.40%	20.848	74.10%	0	0.00%
413	42.262	61.60%	0	0.00%	83.899	77.98%
421	2.058	3.00%	2.603	9.25%	3.336	3.10%
431	13.721	20.00%	4.685	16.65%	20.353	18.92%
Total Axis 4	68.607	9.48%	28.136	2.67%	107.588	6.09%
Technical assistance 511	28.586	100.00%	41.645	100.00%	67.997	100.00%
511	28.586	3.95%	41.645	3.95%	67.997	3.85%
TOTAL	723.737	100.00%	1.054.374	100.00%	1.765.794	100.00%

Source: Author processing data from Rural Development in the European Union - Statistical and economic information – 2012, European Commission

\* The axes and measures are as follows:

Axis 1: Improving the competitiveness of the agricultural and forestry sector: 111 - Vocational training and information actions, 112-Setting up of young farmers, 113 - Early retirement, 114 - Use of advisory services, 121 - Modernisation of agricultural holdings, 122 - Improvement of the economic value of forests, 123 - Adding value to agricultural and forestry products, 124 - Cooperation for development of new products, processes and technologies in the agriculture and food sector and the forestry sector, 125 - Infrastructure related to the development and adaptation of agriculture and forestry, 131 - Meeting standards based on Community legislation, 132 - Participation of farmers in food quality schemes, 131 - Semi-subsistence farming, 142 - Producer groups;

Axis 2: Improving the environment and the countryside: 212 - Payments to farmers in areas with handicaps, other than mountain areas, 213 - Natura 2000 payments and payments linked to Directive 2000/60/EC (WFD), 214 - Agri-environment payments, 215 - Animal welfare payments, 216 - Non-productive investments, 221 - First afforestation of agricultural land, 223 - First afforestation of non-agricultural land, 224 - Natura 2000 payments, 225 - Forest-environment payments, 226 - Restoring forestry potential and introducing prevention actions, 227 - Non-productive investments;

Axis 3: Quality of life in rural areas and diversification of the rural economy: 311- Diversification into non-agricultural activities, 312 - Business creation and development, 313 - Encouragement of tourism activities, 321 - Basic services for the economy and rural population, 322- Village renewal and development, 323- Conservation and upgrading of the rural heritage;

Axis 4: Implementation of the Leader approach: 411 - Implementing local development strategies. Competitiveness, 413 - Implementing local development strategies. Quality of life/diversification, 421 - Implementing cooperation projects, 431 - Running the local action group, acquiring skills and animating the territory as referred to in Article 59.

According to data from Rural Development in the European Union-Statistical and economic information-2012 of the three countries noted the following:

In Estonia were allocated funds amounting to 723.73 million euro divided into axes as follows: for Axis 1, Improving the Competitiveness of the agricultural and forestry sector and Axis 2, Improving the environment and the countryside, percentages are approximately equal, respectively of 36.48% for Axis 1 and 36,97% for Axis 2, with the amount of 264.034.000€ and 267.568.000€. Under Axis 1, for Measure 121 Modernisation of agricultural holdings were awarded more than half of the value of the funds, the amount of 147.038.000€. Within axis 2 dominates Measure 214, Agri-environment payments with funds worth over 168 million euro. For Axis 3 the amounts available are 94.941.000€. Within this axis were able to access funds for 2 Measures, namely 312 - Business creation and development having allocated the sum of 53.514.000€ representing 56,37% of the total axis and Measure 322 - Village renewal and development with funds amounting to 41.428.000€. For axis 4, Implementation of the Leader approach the funds allocated have the value of 68.607.000€, representing 9,48% of the total amount allocated to Estonia.

The amount of funds allocated to Latvia is 1.054.374.000€, 45% more than in the case of Estonia. Most of the funds are allocated to axis 2 (410.729.000 €, representing 38,95% of the total funds), followed by axis 1 with sums amounting to 396.245.00€ (37,58%). The largest sums for Axis 2 shall be allocated to the measure 212, Payments to farmers in areas with handicaps, other than mountain areas (185.770 € representing 45,23% of total axis 2). Under axis 3, from the total of 177.620.000 €, the sum of 97.551.000 € that is 54,92% shall be allocated to the measure 312, Business creation and development.

From the EAFRD most funds were allocated to Lithuania, respectively the amount of 1.765.794.000 €. We can say that the value is 2,44 times higher in comparison with Estonia, and with 67% higher than the funds allocated to Latvia. In the case of Lithuania, for Axis 1 is allocated the most funds, respectively, 42,51%, meaning the amount of 750.686 million of euro, followed by Axis 2 with a variable of 36,36% and an allocation of 642.014.000 € and Axis 3 with a percentage of 11,19% which is 197.508.000 €.

According processed and analyzed data we can see some similarities in terms of allocation:

- under axis 1, Improving the competitiveness of the agricultural and forestry sector, all three States allocate most funds for measure 121, Modernisation of agricultural holdings, which denotes the importance of modernising the pursuit of agricultural holdings through a better use of human resources and factors of production;
- within axis 2, Improving the environment and the countryside, in all three countries analysed so far predominate 214 - Agri-environment payments, with the largest amount of funds allocated to this measure in the total Axis 2, respectively the amount of 168.710.000 € in Estonia (which represents 23,3% of the total value funds intended for Estonia), 180.055.000 € in Latvia and 277.035.000 € in Lithuania.
- within the framework of the axis 3, Quality of life in rural areas and diversification of the rural economy, in all three countries, the largest part of the funds earmarked for this axis were directed to measure 312, Business creation and development, which means that those countries considered priority the overall objective of the measure aimed at the sustainable development of rural economy by encouraging non-farm activities in order to increase the number of jobs and additional incomes. The highest percentage of appropriations on this measure in this axis can be found in Estonia (56,37%) with the amount of 53.514.000 €, while in Latvia have the highest value of funds on this measure (97.551.000 €), but that represents 54,92% of the total axis 3.
- within the framework of the axis 4, Lithuania registred a total of 107.588.000 € which means 6,09% of total funds allocated, while Estonia benefits from 68.607.000 € that represent 9,48% of the funds allocated for this country and Latvia is ranked the last place having only 28.136.000 € representing 2,67% of the total.
- for axis 5 Technical assistance, 511, all three countries have similar percentages for the support of this axis, respectively a percentage of 3,85% to 3,95% and amounts to € 28.586.000 in Estonia, 41.645.000 € in Latvia and 67.997.000 € in Lithuania.

## 5. The degree of accessing funds in Estonia, Latvia and Lithuania until September 2012.

With the EU funding support it is expected to increase the competitiveness of the rural areas creating attractive living and working environment by introducing a complex problem solving for land owners involving land fragmentation, reduction of irrational local road network, lack of infrastructural facilities, and etc. (Pasakarnis, Giedrius, Maliene, Vida, 2011, pg. 1424).

Regarding the degree of access of funds are listed below sums granted until September 2012 under the EAFRD for analyzed countries.

Table 3. Financial execution per Member State, programming period 2007-2013

Axeses/ Measures	Estonia		Latvia		Lithuania	
	000 €	% axis	000 €	% axis	000 €	% axis
111	927	0.61%	335	0.14%	9.025	1.86%
112	11.900	7.85%	6.254	2.62%	62.423	12.88%
113	0	0%	11.710	4.91%	63.153	13.03%
114	2.470	1.63%	5	0.00%	941	0.19%
121	93.704	61.79%	164.595	68.99%	264.342	54.55%
122	5.110	3.37%	2.523	1.06%	6.715	1.39%
123	13.853	9.13%	21.028	8.81%	42.743	8.82%
124	205	0.13%	0	0%	0	0%
125	19.138	12.62%	12.969	5.44%	26.675	5.51%
131	886	0.58%	3.010	1.26%	0	0%
132	0	0%	0	0%	58	0.01%
141	2.539	1.67%	15.500	6.50%	8.480	1.75%
142	923	0.61%	645	0.27%	0	0%
Total Axis 1	151.656	35.42%	238.576	37.30%	484.555	49.46%
212	34.955	20.50%	157.476	55.13%	204.597	51.32%
213	2.773	1.63%	8.412	2.95%	1.035	0.26%
214	110.336	64.70%	106.303	37.22%	151.554	38.01%
215	12.344	7.24%	0	0%	0	0%
216	1.180	0.69%	0	0%	0	0%
221	243	0.14%	0	0%	14.218	3.57%
223	0	0%	8.045	2.82%	17.608	4.42%
224	8.696	5.10%	3.913	1.37%	1.171	0.29%
225	0	0%	0	0%	205	0.05%
226	0	0%	1.480	0.52%	6.506	1.63%
227	0	0%	0	0%	1.810	0.45%
Total Axis 2	170.529	39.83%	285.629	44.66%	398.704	40.69%
311	0	0%	0	0%	4.306	10.43%
312	24.257	42.41%	41.223	44.92%	16.966	41.09%
313	0	0%	2.384	2.60%	9.417	22.81%
321	0	0%	47.355	51.60%	0	0%
322	32.937	57.59%	0	0%	10.599	25.67%
323	0	0%	817	0.89%	0	0%
Total Axis 3	57.194	13.36%	91.778	14.35%	41.287	4.21%
411	940	3.13%	0	0%	0	0%
413	22.519	75.10%	8.496	84.54%	8.190	54.97%
421	108	0.36%	0	0%	31	0.21%
431	6.419	21.41%	1.554	15.46%	6.677	44.82%
Total Axis 4	29.985	7.00%	10.050	1.57%	14.898	1.52%
Technical assistance 511	18.769	100.00%	13.561	100.00%	40.294	100.00%
Technical assistance 511	18.769	4.38%	13.561	2.12%	40.294	4.11%
TOTAL	428.133	100.00%	639.594	100.00%	979.739	100.00%

Source: Author processing data from Rural Development in the European Union - Statistical and economic information – 2012, European Commission

Regarding the degree of access to funds, we find the highest value for Lithuania (979.739.000 €). If we make a calculation by reference to the total amount, Latvia has the highest level of access to funds, it is over 60%, but also the other countries have similar percentages of 59.1% for Estonia and 55.5% for Lithuania.

In all three countries, the largest high grade access occurs for Technical assistance, 511, where all States have access to 100%.

In Estonia, the highest degree of access it was registered for Axis 2, Improving the environment and the countryside that is 39,83% of the total funds accessed, with a value of 170.529.000. Measure 214, Agri-environment payments was the most accessed under this axis. For Axis 1, the percentage of accessing funds is 35,42% with the amount of 170.529.000€. In this axis, to measure 121 were collected the most funds, 93.704.000 €. From Axis 3 were accessed funds worth 57.194.000 €, respectively 13.36% of the total funds paid to this country. Within Axis 3, for Measure 322 Village renewal and development has achieved 57,54% of these funds and for Measure 312 were received funds of 24.257.000€. For Axis 4 were accessed funds worth 29.925.000€ representing 43,7% of the total funds allocated to this axis.

In Latvia, as in the case of Estonia, the highest level of access has registered for Axis 2, where there were received 285.629.000 €, respectively 44,66%. Under this axis, measure 212, Payments to farmers in Areas with Handicaps, other than Mountain Areas was the most accessed and managed to bring 157.476.000 € that is 55,13%. For Axis 1 Improving the Competitiveness of the agricultural and forestry sector were charged 238.576.000 €, respectively 37,3% of all funds accessed and the harnessed measure is 121, which brought a total of 164.595.000 € equivalent to 68,99% of the total axis. For Axis 3, Latvia has received 91.778.000€ representing 14,35% of the total funds collected. The most used measure was 321 Basic services for the economy and rural populations with the amount of 47.355.000€. For Axis 4 have received funds amounting to 10.050.000€.

As in the other two countries, we can say that in Lithuania the most accessed measure under Axis 1, has been 121, with an amount of 264.342.000€, respectively 54.55% of total axis. Axis 1 has the highest percentage (49,46%) and a value of 484.555.000€ funds received. Under Axis 2, the most accessed measure has been 212 who received an amount of 204.597.000€ that is 51,32%. For the Axis 3, the most used measure was 312, which received a total of 16.966.000 € out of a total of 41.287.000€. From the axis 4 were used 13,8% of the funds available on this axis, respectively the amount of 14.898.000€.

## **6. In conclusion**

The three countries have experience in implementing EU funds considering that benefited from rural Development Plans in 2004-2006 and SAPARD.

For rural development policy at EU level through EAFDR was allocated a budget of 96,3 billion euro for the period 2007-2013. The total amount of funds for the three countries compared in this article is 3.543.905.000 euro, allocated as follows: Estonia have funds amounting to 723.737.000 euro, Latvia (1.054.374.000€) and Lithuania received 1.765.794.000 euro.

Lithuania is the largest country in the group of the three Baltic countries with an area of 65.300 km<sup>2</sup>, GDP recorded the highest value (32.781,8 millions of euro) and has the largest number of the population (3.007.758). However, the highest value of the indicator GDP /person we observe in Estonia (12.688 euros / person). Lithuania

recorded the highest number of people working in the sector (141.500 people). The farms are less in Estonia (19.610), in Latvia are 83.390 farms and in Lithuania are more farms (199.910).

Regarding the degree of access to funds until September 2012 we find the highest value for Lithuania (979.739.000€). If we make a calculation by reference to the total amount results that Latvia has the highest level of access to funds, it is over 60%, but and the other countries have similar percentages of 59.1% for Estonia and 55.5% for Lithuania.

In Estonia, the highest degree of access it was registered for Axis 2, Improving the environment and the countryside that is 39,83% of the total funds accessed, with a value of 170.529.000. Measure 214, Agri-environment payments was the most accessed under this axis. In Latvia, as in the case of Estonia, the highest level of access has registered for Axis 2, where there were received 285.629.000 €, respectively 44,66%. Under this axis, measure 212, Payments to farmers in Areas with Handicaps, other than Mountain Areas was the most accessed and managed to bring 157.476.000 € that is 55,13%. As in the other two countries, we can say that in Lithuania the most accessed measure under Axis 1, has been 121, with an amount of 264.342.000€, respectively 54.55% of total axis. Axis 1 has the highest percentage (49,46%) and a value of 484.555.000€ funds received.

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## CONCEPTUAL DELIMITATIONS ON SUSTAINABLE DEVELOPMENT

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**Abstract:** *Sustainable development is a model for resource use meant to satisfy human needs, without polluting the environment, so that these needs can be satisfied not only in the present, but in the future as well. It is a concept of nowadays with no generally accepted definition, placing environment first and foremost, aiming at implementing the environmental policies in all structures and at all economic levels. Within the present study we have aimed at creating a conceptual delimitation on sustainable development, sustainability and social responsibility, concepts of present interest, that tend to become a mystery for the academic community and practitioners by their variety and complexity of approaches. During our scientific endeavor we believe that social responsibility is the foundation of sustainable development. Sustainable development is a concept used especially at macro-economic level, while social responsibility is used at entity level and incorporates the economic, environmental and social dimension, which has a voluntary character and tries to respond to the information needs of the society and other stakeholders. Sustainability at the entity's level is the goal or final objective of sustainable development – satisfaction of present needs without compromising the possibility for future generations to satisfy their own needs, while social responsibility is an intermediate phase of sustainability wherein entities try to balance the economic, social and environmental dimension. Thus, we can state we include ourselves within social corporatism, slightly close to social institutionalism, which is characteristic to developed countries, giving a particular importance to social contract and relations between entity and society. We believe that in Romania, a POSDRU funded project should be regarded as a legal person with social values, which must be based on sustainable development and to promote, besides legal liability of automatically deriving legal contract, social responsibility, which resulting from its relationship with society in which it is implemented, and within these relations, environmental protection represent a major social responsibility of any kind of project.*

**Key words:** sustainable development, social responsibility, sustainability, conceptual approach, environmental economy, POSDRU funds

**JEL Classification:** M19

### 1. Introduction

The economy of environmental protection implies the achievement of a sustainable, compatible ecological development, linking humans, economy and environment, believing there is a tight link between natural disasters, environmental mutations and the economic development of each state.

Sustainable development is a model for resource use meant to satisfy human needs, without polluting the environment, so that these needs can be satisfied not only in the present but in the future as well.

The meaning of sustainable development is given precisely by the endogen model of reconciliation between man and nature. The developing countries need to accelerate their growth rate, but within strategies considering the natural physical environment, by means of using less energy intensive and non-polluting technologies. The countries with a developed potential from a financial, economic, human and technological point of view have multiple chances of projecting a sustainable development.

The main objective of our study is to offer a clear image on the concepts of *sustainable development*, *sustainability* and *social responsibility*, concepts that are of present interest, which by a variety and complexity of approaches tend to become a mystery both for the practitioners and the academic community.

## **2. Research methodology**

The use of certain research methods and instruments was necessary when conducting this scientific approach in order to facilitate the scientific research process (Mustata, 2008: 13). From the point of view of research currents, the present paper aligns to the main research current, having a positive and constructive touch. As far as the research typology is concerned, the study is a theoretical, fundamental research. Amongst the research methods specific to qualitative research we have used as part of this scientific approach we would mention comparative analysis and non-participative observation.

## **3. The Concept of Sustainable Development**

„Sustainable development is loyalty towards the future”(Pearce et al., 1989: 20). According to Tietenberg (Tietenberg, 1984), if a project maximizes the updated value of benefits, but incurs losses for the future generations, a quota from the gained benefits should be put aside in a compensation fund for „inter-generations”. Sustainable development is probably the key element of the 21<sup>st</sup> century humanity. It is a difficult to grasp concept, mainly due to this notion's richness, diversity and complexity. There are more than 100 definitions in use and various persons understand in different ways this term, depending on their political and ideological convictions (Hibbitt, 2001). Nevertheless, there is no generally accepted definition of sustainable development, which is a problem for practitioners, but also an attraction point for academicians (Moneva et al., 2006: 122).

Sustainable development has gained a particular place with the issue of the Brundtland Report in 1987 and the acknowledgment of the greenhouse effect, the most widely accepted definition of sustainable development being the one proposed in this report. The Brundtland Report defines sustainable development as the satisfaction of present needs, without compromising the capacity of future generations to satisfy their own needs (WCED, 1987). The Agenda 21 defines sustainable development as that development which doesn't destroy or compromise the ecological, economic and social basis that continuous development depends on (WTOEC, 1995).

Sustainable development doesn't consider exclusively the environmental aspects. The reference document for the **World Summit on Sustainable Development** in 2002 speaks about the independence and mutual support of the pylons of sustainable development such as economic development, social development and environmental protections. Certain researchers have mentioned in time, during the

various international forums the existence of the fourth pylon of sustainable development, i.e. cultural diversity.

The uniqueness of sustainable development as concept consists in the attempt to include the environmental and inter-generations dimensions in the neoclassical theory of economic development (Purvis and Grainger, 2004, pp. 1). This has inevitably led to the development of an approach which is meant to work within the existing production and distribution economic system, placing emphasis on the use of economic instruments in order to secure the proposed results. Thus, sustainable development is a concept combining the postmodernist pessimism on the domination of nature and the illuminist optimism on the possibility to reform human institutions (Dresner, 2002).

Critics on this concept have not delayed to occur:

- John Baden believes that the notion of sustainable development is dangerous, because the consequences of using such concept are procedures of unknown or potentially dangerous effects (Baden, 2008);
- The term „sustainable development" is criticized for its lack of clarity, considered an absurd term, or more likely, so vague that it means nothing, proving contradictory: „The term is more charming than significant [...]" (Ferry, 2007: 78);
- Sustainable development hides a protectionism practiced by developed countries in order to hinder the development of other countries. Sustainable development is a pretext for protectionism and is considered a perfect help for capitalism (Brunel, 2008);
- The „decrease" is a political and economic ideology, pleading for a gradual decrease of the economic production. The supporters of this ideology believe that the decrease of production is the only solution for the current environmental problems the humanity is facing, and that sustainable development is not possible (Clémentin and Cheynet, 2008).

In our opinion, although sustainable development can be criticized for lack of clarity and difficulty of being put into practice or maybe, on one side hides the protectionism of developed countries, it represents an acknowledgement of the fact that the planet's natural resources are limited and that the natural environment shows a limited capacity for waste absorption. These limits, once surpassed, compromise the capacity of future generations to satisfy their own needs. Thus, sustainable development, before everything, is a way of performing our activities, day by day, a way of acting such as to ensure a balance between the planet's natural limits, the satisfaction of present needs and the satisfaction of future needs.

The introduction of the sustainable development dimension within POSDRU funded projects is a necessity in order to increase the sustainability of projects because as sustainable development seeks to promote a more efficient in terms of greener and more competitive use of resources.

#### **4. Sustainability Development versus Sustainability**

In the Anglo-Saxon literature the term used is "sustainable development". In Romanian, the translations used are both "durable development", as well as the more forceful „sustainable development". The last translation derives from the word „sustainable", which in turn comes from „sustain"- to support (oneself) and „able"-capable. Henceforth two perceptions of this concept leading to the same result, that

of „development within the limits of the *supportcapacity*" (Petrișor, 2002: 2; Conway and Barbier, 1988: 654):

- „*capacity to sustain*"- the capacity of natural resources to sustain unlimitedly the development of the human society, a use of natural resources within the limits of the support capacity;
- „*capacity to self-sustain*" - refers to a development that would ensure on one side, the evolution of the human social and economic system without affecting the existence of future generations, and on another side, it suggests the idea of an evolution within the limits of the support capacity

Sustainability is a concept referring to a process of equal allocation of resources, at global level. The equity or correctness derives from a rational and responsible distribution of resources and from the existing opportunities in the present and future generations (O'Dwyer and Owen, 2005; Dragomir, 2008: 2).

There are also certain confusions regarding the terms "sustainable development" and "sustainability". The sustainable development and sustainability have been and are still considered synonyms by many researchers, despite the fact that Brawn Lester was writing in 1988 about sustainability: „The concept of sustain capacity is used by biologist for many years, but until recently, it has been rarely considered by economists" (Lester, 1988: 34). Sustainability, in a large sense, means the capacity to maintain certain process and is more frequently used in connection to biological and human systems, in other words, sustainability is not a concept specific for the field of economics. Starting with 1980, the idea of human sustainability starts to be more and more associated with the integration of the three spheres specific to sustainable development: economic, social and environmental. In 1989, the United Nations Brundtland Commission defines sustainability as the satisfaction of present needs, without compromising the future generations' capacity of satisfying their own needs (United Nations, 1989), definition which the Bruntland Commission used in 1987, in its report called *Our joint future*, in order to define the concept of sustainable development.

Foreign literature (Schaltegger et al., 2006) highlights that a distinction must be made at entity level, between „sustainability" and "sustainable development". In order to conform to the principles of sustainable development, an entity must establish a set of objectives and targets it wishes to achieve, thus heading towards sustainability. We can therefore visualize *sustainability* as the final objective an entity would wish to achieve, the statute or situation it aspires to, and *sustainable development* as the process by means of which human activity heads for sustainability or maintains this statute (Hibbitt, 2001). It results that sustainability is a specific concept at entity level, frequently used at micro-economic level, while sustainable development has a much wider inclusion area, and the concept is used at macro-economic level. We are thus talking about sustainable development as a principle or objective, at national or international level, and sustainability as an objective at entity's level.

In conclusion, although some researchers consider sustainability as a synonym for sustainable development, we believe sustainability to be a specific concept at entity level, frequently used at micro-economic level and associated with the integration of the three spheres specific for the sustainable development: economic, social and environmental, whilst sustainable development is an objective or principle used at macro-economic level.

In POSDRU funded projects, sustainability is a key criterion in awarding funding that should be followed for the entire implementation of the project and monitoring how the project is constructive for natural and social context in which it is implemented to generate new ideas and services when the grant ends<sup>2</sup>.

### **5. Sustainable Development versus Social Responsibility**

Similar to the globalization or sustainability, social responsibility is a complex concept, with much significance which, as removed, new meanings of this concept come out (Shanahan, 2001). As a result, within the entities and the academic world there is an uncertainty regarding the way social responsibility is defined. Certain researchers go so far as to believe that there is no definition of this concept whatsoever (Jackson and Hawker, 2001). The problem is more likely represented by the fact that there is a large variety of definitions, influenced by specific interests and as a result, hinder the development and implementation of the concept (Van Marrewijk, 2003).

Alexander Dahlsrud (Dahlsrud, 2007) identifies during a content analysis 39 definitions frequently used, five dimensions of social responsibility:

- Environmental dimension – natural environment;
- Social dimension – relation between entity and society;
- Economic dimension – social, economic and financial aspects;
- Stakeholders dimension – group of users;
- Voluntary dimension – actions not having been prescribed by the law.

By combining these dimensions a variety of definitions and visions on sustainable development is resulting from. The most frequently used definition in the specialized literature for representing the concept of social responsibility is issued by the European Commission, definition incorporating all five dimensions mentioned above: Social responsibility is a concept that entities use to voluntarily integrate social and environmental concerns within the economic operations and their interaction with the stakeholders (European Commission, 2001).

Social responsibility is a *brilliant* term (Göbbels, 2002: 96) debating the relations between the business environment and society. Depending on how it regards the entity and the connection between the entity and society, there have been five approaches identified on social responsibility, based on different political specters (Carter and Burritt, 2007):

- *Fundamentalism, neoclassicism or owners / shareholders approach* is the approach corresponding to the right hand political spectrum stating that entities are purely legal creations and not social institutions, as social responsibility is limited to paying taxes and creating new jobs (Klonoski, 1991; Moir, 2001);
- *Social corporatism or users approach* is based on the fundamentalist approach wherein the purpose of a corporation is to create profit, by admitting and accepting at the same time the social aspects arising during the actions taken by the entity. This approach is a melting between the fundamentalist belief and the social institutionalism. One of the first supporters of this approach, Druker, claimed that in order to pursue their own interest, entities should be concerned

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<sup>2</sup> National Centre for the Development of Vocational and Technical Education POSDRU Informative note, november 2009

by society and undertakes some of the responsibility appearing beyond the traditional economic areas. Social corporatism considers sustainable development and social responsibility as business strategies, determining entities into becoming more receptive to the changes occurring in their environment of operation (Dentchev, 2005; Brown and Fraser, 2006);

- *Social institutionalism* approaches the entity as a social institution with social responsibilities, necessary for the creation and promotion of an open and transparent democratic society (Klonoski, 1991; Brown and Fraser, 2006). This approach is based on the social contract and represents the middle ground between fundamentalism and criticism (Gray et al, 1988). According to this approach, the entity should respond to the society's needs and demands and must be fully responsible before it (Gray et al, 1995). Social institutionalism is the dominant approach in the current academic debates, based on the entity legitimacy theory and stakeholders or user theory. (Norris and O'Dwyer, 2004);
- *Moralism* is an approach close to social institutionalism, but a little more philosophical, directing social responsibility towards philosophy, thus incorporating moral and ethical virtues. The entity represents a legal person, intangible, responsible (Klonoski, 1991), which needs to be treated just as a private person, having the possibility to make it accountable for actions taken. Palazzo and Scherer (Palazzo and Scherer, 2006) believe that the entity's moral legitimacy is the foundation of social responsibility;
- *Critical theory* represents a new approach corresponding to the left hand political spectrum, bringing about a critical vision over the other approaches presented above. For the critics, social responsibility is a potential victim of daily activities, a mystery, where meanings are lost among the members of the society (Brown and Fraser, 2006), and the social, ethical and environmental reports are means of disinformation or ways of washing out responsibilities (Brown and Fraser, 2006).

Considering three of the five dimensions (economic, environmental, social) we raise the following question: what is the difference between sustainable development and social responsibility? In order to answer such question, we have analyzed the study conducted by Ebner and Baumgartner (Ebner and Baumgartner, 2006), including 43 articles published between 1998 and 2006, with the subject of social responsibility and sustainable development. The authors have identified the following treatments applied to social responsibility:

- Social responsibility is interpreted as the social dimension within the concept of sustainable development. In this case, the responsibility of an entity includes social, economic and environmental responsibility (Zwetsloot, 2003; DesJardins, 1998);
- Social responsibility is the foundation or base of sustainable development. Sustainable development is a concept used at large scale, macro-economic level, while social responsibility is only used at entity level, expressing the sustainable orientation of the entity. There are small differences between sustainability and social responsibility at entity level: sustainability focuses on creating value, environmental management, ecological production system and human capital management, while social responsibility is associated to certain aspects of communion between individuals and entities (Dawkins and Lewis, 2003);

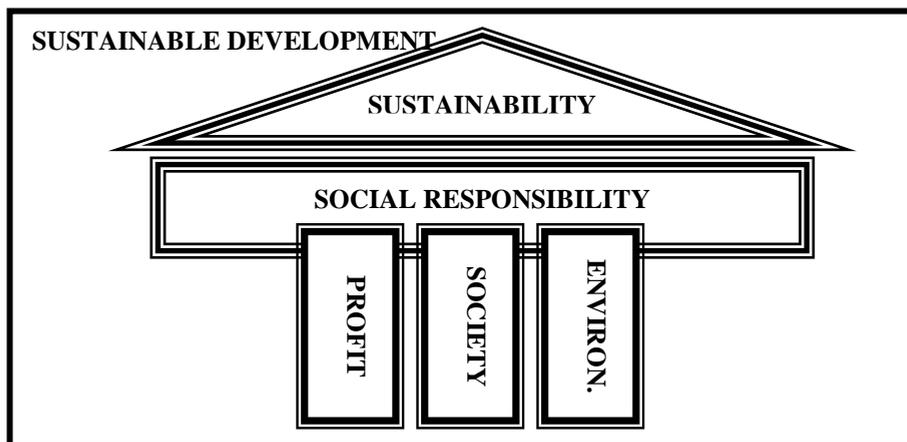
- Social responsibility is treated as a tridimensional model, synonymous with sustainable development (Cramer, 2004). This trend comes from the American researchers and entities tempted to replace the concept of sustainable development with the concept of social responsibility.

To be sustainable, POSDRU funded projects should increase social responsibility in the communities in which they are implemented and to create added value to the society in which are implemented on a long time orizot.

## **5. Conclusions**

Sustainable development is a concept of present interest at national, European and international level, a new philosophy of development, a fundamental objective towards which European countries aspire to reach.

During our scientific endeavor we believe that social responsibility is the foundation of sustainable development. Sustainable development is a concept used especially at macro-economic level, while social responsibility is used at entity level and incorporates the economic, environmental and social dimension, which has a voluntary character and tries to respond to the information needs of the society and other stakeholders. Sustainability at the entity's level is the goal or final objective of sustainable development – satisfaction of present needs without compromising the possibility for future generations to satisfy their own needs, while social responsibility is an intermediate phase of sustainability wherein entities try to balance the economic, social and environmental dimension (Figure 1). Sustainability and corporate social responsibility (CSR) are concepts often used in the same context. Nevertheless, sustainability is a complex concept aiming to promote long term growth, for all forms of available capital (financial, natural and social), and corporate social responsibility is a more narrow concept, focused on short term problems and activities such as observance of legislations, philanthropy and the improvement of working conditions. In general, we could say that many entities claim to be responsible towards the society, but only few would claim to be actually sustainable.



**Figure 1.** Representation of the relation between sustainable development, sustainability and social responsibility at entity level  
Source: author's projection

Thus, we can state we include ourselves within social corporatism, slightly close to social institutionalism, which is characteristic to developed countries, giving a particular importance to social contract and relations between entity and society.

We believe that in Romania, a POSDRU funded project should be regarded as a legal person with social values, which must be based on sustainable development and to promote, besides legal liability of automatically deriving legal contract, social responsibility, which resulting from its relationship with society in which it is implemented, and within these relations, environmental protection represent a major social responsibility of any kind of project.

## 6. Acknowledgements

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## CONVERGENCE AND DIVERGENCE IN EUROPEAN UNION: EVIDENCE FOR BETA CONVERGENCE AMONG NEW EU MEMBER STATES

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**Abstract:** *Convergence may be considered a central issue of the current economic literature, and not only, concentrating upon income distribution within different economies, but also focusing on different aspects of polarity and inequality that characterize especially the emerging economies. Testing convergence within economies may serve as a useful instrument for the validation of the economic growth models. While convergence was considered a defining element of the neoclassical growth models, the majority of the new endogenous growth models argue in favour of divergence across different economies. Testing convergence among European Union is even more challenging due to the high degree of heterogeneity that characterizes these economies. The recent accessions with ten new countries in 2004 and with another two in 2007 were considered only the first step towards assuring a sustainable convergence and finally adopting a common currency-the euro. A series of empirical studies concentrated upon testing convergence among EU, using as benchmark the real convergence quantified by the level of GDP/capita as an indicator for the living standards of every economy. The most popular approach rely on Beta and Sigma convergence, the first one being an indicator of the GDP/capita dispersion between different economies, and the later one being an estimator of the reverse relationship between GDP/capita and its initial level. The main purpose of this paper is to test Beta converge among the new EU member states, in order to obtained more information about the fact whether the poor countries are trying to catch-up with the more developed ones. Also Beta convergence indicator embodies useful information about conditional and unconditional convergence, two leading hypothesis within the neoclassical and endogenous growth models. For Beta convergence hypothesis to be valid it should be taken into consideration a "catch-up" mechanism over a longer period of time and a set of elements that are inter-correlated with the main objective of reducing disparities among economies. However we also have to take into consideration the fact that these elements may be influenced by temporary shocks that may have a decisive impact upon their short time performance.*

**Keywords:** Beta convergence, real convergence, emerging economies, growth models.

**JEL classification:** O11

## 1. Introduction

*Conducting an objective analysis upon the criteria, policies and instruments used in the convergence process by the new European Union member states may be considered extremely challenging. The correct analysis and interpretation of convergence nowadays it's considered to be very important and thus the study of its impact beyond the general policies imposed by the European Union through the nominal convergence criteria could highlight the mutations across economies and especially the correlations between them. During time, a series of papers discussed and quantified using different instruments the degree of convergence between economies. If we were to classify the main trends related to the process of real convergence across the Central-Eastern economies we may distinguish between the following categories (Ingianni, 2010):*

- *The first category takes into consideration time series variables regarding the evolution of GDP/capita for the purpose of testing convergence using some standard measures like Sigma and Beta convergence. Convergence in terms of Sigma and Beta indicators is an extremely debated subject and many studies concentrate their empirical research upon these two aspects. A representative article is the one elaborated by Ingianni A., Vaclav Z. (2007) that using quarterly data regarding GDP/capita evolution obtained significant results for real convergence across European Union both for Sigma and Beta convergence. Bruggeman and Trenkler (2007) also investigates the degree of convergence across Hungary, Czech Republic and Poland in order to test the integration effects upon GDP/capita across European Union and also upon a group of Mediterranean states over a longer period of time. The used instruments are the unit root tests that allow the analysis of structural breaks. The general conclusion of the study is that Czech Republic and Hungary stochastically converge towards the group of Mediterranean states, while only Hungary converges towards EU average.*
- *The second trend uses different economic indicator for testing convergence among different economies. Kocenda, (2001), Kutan and Yigit, (2004) concentrate their research in this field. Kocenda (2001) analysis the performance of Central-Eastern economies like Czech Republic, Slovakia, Lithuania, Latvia, Estonia, Hungary, Poland, Romania, Bulgaria and Albania using monthly data from 1991 to 1998. The obtained results indicate convergence across these economies, but its intensity is highly influenced by the set of included variables and also by the group of countries. The Baltic countries registered high convergence rates, being at the same time the most homogenous group. The convergence hypothesis was validated across all states regardless of their initial condition, institutional background or privatization techniques used by every economy. Kutan and Yigit (2004) use an endogenous model of economic growth in order to test the impact of European Union integration upon productivity growth and convergence. The authors use a derivate version of this model that allows them to incorporate new estimation techniques for obtaining more precise results. The group of countries taken under observation is formed by Spain, Portugal, Austria, Sweden and Finland. The obtained results are in favour of convergence across these states.*
- *The third trend focuses upon eastern economies in the post-liberalization period. Dobrinsky (2006) quantifies the connection established between real*

and nominal variables involved in the dynamics of exchange rate (Balassa–Samuelson effect). There are three main discussed directions namely: testing the degree of convergence between the new member states and the EU average, the analysis of the economic fundamentals that support the catch-up process and testing the Balassa-Samuelson effect across new EU member states. The results confirm the convergence hypothesis for that particular group of countries.

## 2. A short insight into Beta convergence analysis

*In what concerns the catch-up process between different economies there is no general consensus both at theoretical but also at empirical level regarding the convergence concept. The methodology used is influenced in the first place by the group of countries taken under observation, the time dimension but also by the data availability. The literature review distinguishes three main concepts that could be associated with the concept of Beta convergence:*

### 2.1 Absolute or un-conditional convergence

*The starting point of this theory is without any doubt the neo-classical growth models that predict convergence across economies towards their steady state (the same for all economies), convergence that it's influenced by a series of factors like the growth rate of population, saving rate and degree of capital depreciation. Barro and Sala-i-Martin (1992) developed a general framework that allows highlighting the main connections between the neoclassical growth model and the catch-up hypothesis. The general representation of the model is the following one:*

$$\frac{1}{T} * \log\left(\frac{Y_{i,T}}{Y_{i,0}}\right) = \alpha - 1/T(1 - e^{-\beta T}) * \log Y_{i,0} + \gamma X_{i,t} + u_{i,t} \quad (1)$$

where  $Y_{i,T}$  denotes the real GDP/capita of country  $i$  at time  $T$ ,  $Y_{i,0}$  is considered the initial GDP/capita of country  $i$ ,  $X_{i,t}$  represents the set of exogenous variables that may have an impact upon the evolution of GDP/capita,  $u_{i,t}$  is the error term,  $\alpha$  is the constant,  $\beta$  is the convergence coefficient that it has to be estimated and  $T$  is the time horizon for the data included in the model.

Barro and Sala-i-Martin use this model in order to test Beta convergence across United States. The model is non-linear in Beta. They obtained a value for Beta of 0,0175 for the time period between 1880-1988 and 0,0224 for the time period between 1880-1990. The positive value of this coefficient indicates that for that particular group of countries the Beta convergence hypothesis is confirmed. This hypothesis was also validated for the OECD member states. The results changed when the sample was extended to the group of 98 economies from all over the world. In this case the convergence hypothesis was infirmed. Taking all these points into consideration, we may conclude that the absolute convergence hypothesis is confirmed only for a group of countries with homogenous characteristics and with similar steady states for a long period of time. Furthermore, it is extremely challenging to quantify absolute convergence across world economies, the majority of studies concentrating upon conditional convergence.

### 2.2 Conditional convergence

As we stated before, neoclassical growth models argue in favour of the fact that economies that do not convergence to the same steady state will not achieve long

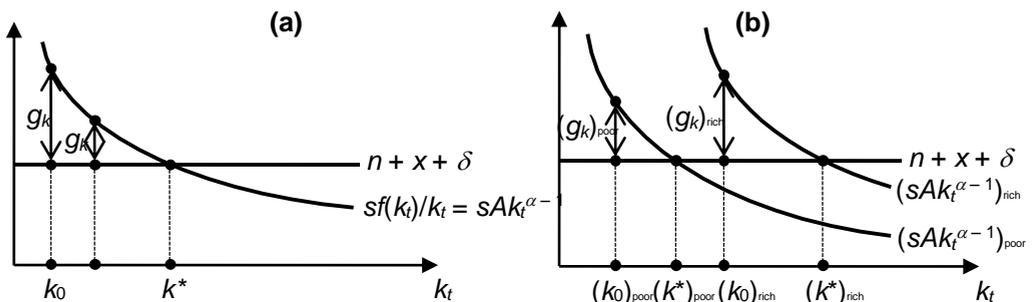
time convergence. A series of empirical studies concentrated upon convergence analysis identified a reverse relationship between the initial level of GDP/capita and its growth rate. In order to test conditional convergence between different economies it is essential to determine those variables known as proxy for long-term economic growth. During time a series of economic, political and institutional variables were investigated in order to establish their impact upon the economic growth process. The study developed by Mankiw, Romer and Weil (1992) provides the framework for what we call today *conditional convergence*. Starting from Solow-Swan growth model, the authors divided the investment component into two additional variables namely: a) investments that improve work productivity by improving the physical capital component; b) investments that improve work productivity by improving the human capital component (Daly,V., 2010). This subdivision of the investment component allows economies to converge towards different steady states. The model may then be summarized as:

$$\log\left(\frac{y_i(T)}{y_i(0)}\right) = A_0 + A_1 \dot{k}_t + A_2 \dot{h}_t - \beta \log(y_i(0)) + \varepsilon_i \quad (2)$$

where  $\dot{k}_t$  and  $\dot{h}_t$  are the tendencies to invest in physical and human capital,  $y_i(T)$  is the GDP/capita for time T,  $y_i(0)$  is the initial GDP/capita,  $\beta$  is the coefficient for convergence,  $\varepsilon_i$  is the error term.

The methodology developed by Mankiw, Romer and Weil (1992) revealed the fact that economies tend to converge towards their steady states at a common growth rate but this steady state may differ between countries.

Conditional convergence is limited by the fact that economies tend towards reaching the same steady state. To illustrate this situation we concentrate upon a simple example. We consider two economies: one rich country and a poor one, each with different saving rates. Clearly the saving rate is much higher within the rich country, which leads to a capital steady state much higher than in the poor country. In this case rich economies starts from a much higher level of capital and this would lead to a higher growth because it tends towards a different steady state than the poor economy. In this case economies will record different convergence trends. A comparative approach towards these two types of convergence namely absolute and conditional convergence is illustrated in the figure below.



**Figure 1.** Absolute vs. Conditional convergence

Source: Matkowski, Z., Prochniak, M., (2004), "Real economic convergence in the EU accession countries", International Journal of Applied Econometrics and Quantitative Studies. Vol.1-3, p.11.

### 2.3 Convergence clubs

Quah (1996,1997) in a series of studies that concentrates upon Sigma and Beta convergence argue in favour of the fact that the previous models are not clear enough in testing the hypothesis whether the poor economies will remain at the same level over a long period of time or by contrary will try to align to the standards imposed by the rich ones. Quah promotes the concept of „convergence clubs”, concept used for the first time in the literature by Baumol (1986). This concept underlines the fact that a group of countries with similar initial conditions will register convergence trends in what concerns their GDP/capita level. An interesting research on the hypothesis of regional convergence across European Union is the one conducted by Fischer and Strirbok (2006) that using spatial econometric models relates the concept of club convergence with the one of spatial heterogeneity. The convergence hypothesis is tested for a group of 256 European regions over a time horizon between 1995 to 2000. The main conclusions follow two directions. In the first place the standard regression model proposed by Barro (1992) is rejected, and secondly there is a heterogeneous convergence trend across European Union regions. Heterogeneity implies both income level but also steady states.

### 3. Beta methodology

Whether this indicator is used to validate the convergence hypothesis within an individual economy or is applied to a group of countries, Beta convergence may be determined using the following formula:

$$T^{-1} \ln \left( \frac{y_t}{y_0} \right) = \alpha + \beta \ln(y_0) \quad (3)$$

where the left side of the equations represents the average growth rates of GDP/capita logarithm between t=0 and t=T,  $\alpha$  represents the constant and  $\beta$  is the variable that we want to estimate.

In order to test for Beta convergence we choose the group of the new member states of European Union that accede in 2004 and 2007, and are whether in the case of being adopted the single currency euro or on the path towards it. The time horizon range between 1992 and 2011, the data source being Eurostat.

**Table no.1** The evolution of the variables included for testing Beta convergence

Country	Initial GDP/capita (1992)	GDP/capita (2011)	Growth rates of GDP/capita 2011/1992
<b>Bulgaria</b>	6520,974	11792,60891	1,808412196
<b>Czech Republic</b>	14407,27	24011,01701	1,66659034
<b>Cyprus</b>	18918,77	26045,55539	1,376704479
<b>Estonia</b>	7532,002	18129,01521	2,40693181
<b>Latvia</b>	6109,658	13773,49335	2,254380417
<b>Lithuania</b>	9278,041	16876,70558	1,818994503
<b>Malta</b>	14912,65	23007,21333	1,542798452
<b>Poland</b>	7748,002	18087,44273	2,334465418
<b>Romania</b>	6346,484	10905,44188	1,71834387
<b>Slovakia</b>	10102,88	20756,72951	2,054535886
<b>Slovenia</b>	14182,98	24967,46976	1,760382498
<b>Hungary</b>	11210,31	17295,38614	1,542810693

Source: Eurostat, 19.03.2013

In what concerns the evolution of GDP/capita, this indicator presents a clear image of the manner in which this countries react to the conditions imposed by EU membership but also of the effects of the economy dynamics. Comparing year 1992 with 2011 the general economies ranking is almost the same during time, countries with high value of GDP/capita being Cyprus and Slovenia at the opposite pole being situated Romania and Bulgaria. The differences in what concerns the GDP/capita may be influenced by o series of factors, the most important ones being related to the political, economical and institutional framework that characterize every economy. We should also notice the fact that this particular group of emerging economies is defined by different historical and also geographical backgrounds that could be considered a source of differences in the levels of GDP/capita. If we were to make a general classification of these economies, the following dichotomy could be applied:

- Baltic countries: Estonia, Lithuania, Latvia;
- Ex members of Czechoslovakia: Czech Republic and Slovakia;
- Ex members of Yugoslavia: Slovenia
- Islands: Malta and Cyprus
- Countries with soviet influence: Romania, Bulgaria, Poland and Hungary.

Also we should take into consideration the fact that the recent financial crisis has triggered dramatic change upon the entire economic system, enforcing a series of adjustments both at national but also at international level across EU.

**Table 2.** The correlation between the initial GDP/capita and the level of GDP/capita

	PIBILOG	DPIBCLOG
PIBILOG	1	-0.1363247706396561
DPIBCLOG	-0.1363247706396561	1

Source: Authors calculations based on Eurostat data.

The results for the correlation between the initial GDP/capita and the level of GDP/capita for the new member states is in line with the neoclassical growth models forecast. According to these models convergence between countries is considered to be the rule, while divergence is perceived as a transitory phenomenon.

#### 4. Empirical results

**Table 3.** Testing Beta convergence among new EU member states

Dependent Variable: LOGRPIB

Method: Least Squares

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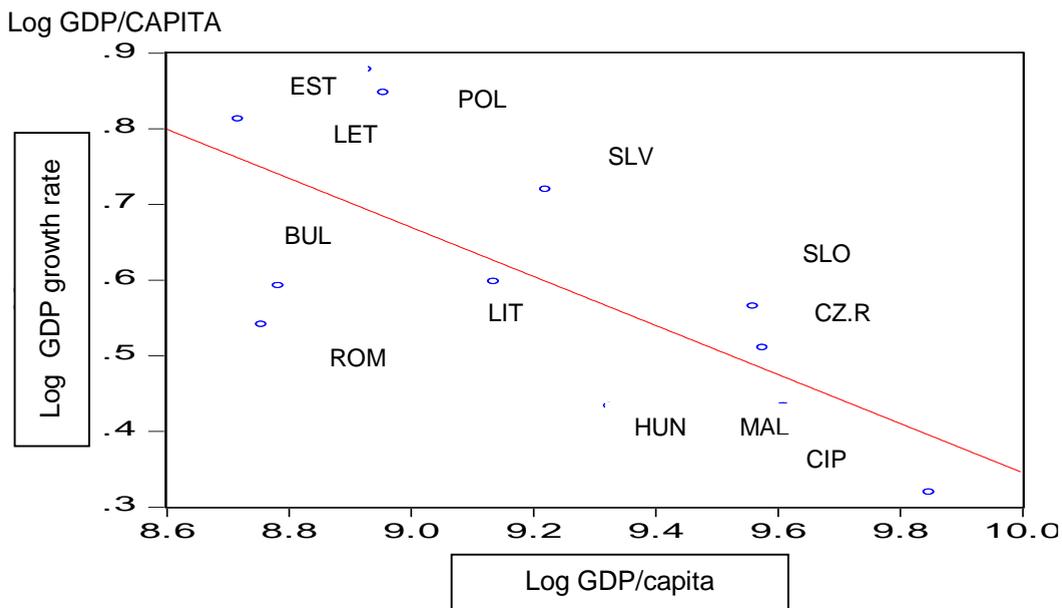
Sample: 1 12

Included observations: 12

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.586576	0.958167	3.743163	0.0038
LOGPIBINITIAL	-0.324104	0.104055	-3.114746	0.0110

R-squared	0.492428	Mean dependent var	0.604501
Adjusted R-squared	0.441671	S.D. dependent var	0.177087
S.E. of regression	0.132322	Akaike info criterion	-1.056146
Sum squared resid	0.175091	Schwarz criterion	-0.975328
Log likelihood	8.336873	Hannan-Quinn criter.	-1.086067
F-statistic	9.701644	Durbin-Watson stat	2.658090
Prob(F-statistic)	0.010972		

Source: Authors calculations based on Eurostat data.



**Figure 2.** Beta convergence across new European Union member states  
Source: Authors calculations based on Eurostat data.

There are a series of empirical studies that concentrate upon the issue of Beta convergence in what concerns the level of GDP/capita among new EU members but also between this group of countries and EU average. A short description of the used methodologies but also the main results of this research are listed in the table below.

**Table 4.** Studies upon Beta convergence across EU members states

Authors and article title	Methodology	Time horizon and variables included	Results
Varblane and Vahter (2005), "An analysis of the economic convergence process in	Beta and Sigma convergence e-panel regression model	1995-2004 Initial GDP/capita ratio The ratio of real GDP/capita of the countries to GDP/capita at the EU level.	For the analyzed period the un-conditional Beta

transition economies”	Beta convergence	1993-2004 Dependent variable: Final GDP/capita / Initial GDP/capita Explanatory variable: average annual growth rate of real GDP per capita	convergence hypothesis is confirmed. The Beta convergence hypothesis is confirmed for all the 8 CEE countries within the sample in what concerns their income levels.	
Matkowski and Prochniak (2007), ”Economic convergence between the CEE 8 and European Union”	Beta and Sigma Convergence-panel data analysis for Beta convergence	1992-2006 Annual GDP growth rates regressed against the GDP levels from the previous year.	The main conclusion of the study is that the countries diverge during 1992-1997 but converge afterwards	
Vajinovic et al (2009), ”Convergence analysis among the ten European transition economies”	ProchniakM., Witkowski B., (2013), ”Time stability of the beta convergence among EU countries: Bayesian model averaging perspective”	Bayesian model averaging, GMM methodology, Blundell and Bond estimator	1993-2010 for EU 27 1972-2010 for EU 15 The logarithm of GDP change of country i in period t, the lagged by one period of GDP level of country i.	The mechanism of convergence was constant over time. The EU 27 countries converge at a rate of 5%/annum while the EU 15 converge

Source: Authors interpretation.

The majority of the studies that concentrate upon testing Beta convergence across European Union and especially among the new member states of EU confirm de convergence hypothesis. After testing Beta convergence across new Member States of the European Union it may be concluded that there is clear evidence to support this hypothesis corresponding to the value of Beta coefficient of -0.32. Even though the value is a little too high it certainly validates the convergence in what concerns the GDP/capita level across new member states. Beta convergence test will be applied only for all the 12 new EU member states, their division in subgroups would lead to the formation of small samples of countries whose inclusion in the model would provide irrelevant data both statistically and economic .

## **5. Conclusions and future research**

The main purpose of this study was to test Beta convergence hypothesis among the new EU member states based upon their GDP/capita. The obtained results confirm the existence of convergence across this group of states, so there is a general *catch-up* tendency between them. The validation of these results is also due to the fact that one of the main objectives of the European Union is to reduce disparities between the economies of the member states through a series of structural and regional policies. In order to develop a more profound analysis of the convergence process across economies, one should take into consideration testing also Sigma convergence, relying on the fact that Beta convergence is a necessary but not a sufficient condition for testing Sigma convergence. This aspect would be developed in future research. In order to achieve a sustainable degree of convergence an economy should concentrate upon a mixture of different economic, political, social and institutional factors that all work together towards achieving the same goal. A high degree of convergence between economies could also contribute to high levels of economic growth and development.

Another challenge would be to test the hypothesis whether these countries converge also towards the average of all EU member states or towards the average of Euro zone. This analysis would provide future information about the efforts of the new member states to align to the general trends imposed by European Union.

## **6. Acknowledgements**

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## EMPIRICAL STUDY REGARDING THE DETERMINING FACTORS OF THE ROMANIAN COMPANIES COMPETITIVENESS

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**Abstract:** *The complexity of the concept of competitiveness lies in the fact that the term is used in various levels of aggregation, allowing the generation of its different meanings at microeconomic, mezzo-economic and macroeconomic level.*

*This study is focused on the concept of company competitiveness, on the relevant factors in order to analyze and explain the advantage of competitiveness for a company in regard to another, as well as the dimension and intensity which it uses the sponsors' capital, the organizational capital, the human capital, the innovational capital and the capital represented by the customers portfolio. Secondly, using the questionnaire method as a research method, the objective of this paper is to provide some empirical evidences designed to assess the factors determining the Romanian company competitiveness on the competitive market. By using an initial dataset of 300 companies, which are part of the 14 fields of activity provided in the activity classification of the national economy, Reviewed NACE 2, we have made their classification on size classes, taking into account as classification criteria the number of employees, the annual net turnover and the value of the total assets held, then testing the opinions of the managers from the selected sample concerning the factors determining the competitiveness of the companies they manage. According to the results, the analysis of the sample structure reflects the control of microenterprises followed by the small and medium sized enterprises. The manner of administration and organization and the quality of the employed human factor are influenced by the company dimension and position held on the market. We consider that the managers of the small size companies, as well as the ones from the provided sample, rely on a preponderant intuitive management, they deal the administered businesses based on the spur of the moment inspiration, make decisions subjectively not starting from objective economic criteria, being concerned only with the management of the current problems. Since they aren't the beneficiaries of a managerial education, they don't possess the necessary competences to focus on the elaboration of certain strategies by which to provide competitiveness and performance on the long-term. However, the managers' training and competence influence on the identification and use of the factors which are able to provide the company development.*

**Keywords:** *company competitiveness; sponsors' capital; organizational capital; human capital; innovational capital; capital represented by the customers portfolio.*

**JEL classification:** D22; L25; O12.

## 1. Theoretical Background

Given the fact that competitiveness reflects the comparative advantage which a company holds in regard to the other competitors at a certain moment on the competitive market, which changes in time and space, then, in their turn, the determining factors of competitiveness are differentiated with respect to the selected analysis reference, respectively the international, national, field and microeconomic references.

Gelei (2003) has used the definition of company competitiveness as „the basic capability of perceiving changes in both the external and internal environment and the capability of adapting to these changes in a way that the profit flow generated guarantees the long term operation of the company. As to him, company competitiveness is basically a function of two factors. First, it is determined by the extent a company can identify those value dimensions that are important for their customers. These are the main features of the companies' complex product and service package a customer expects. The second factor of company competitiveness is the sum of resources and capabilities that make a company capable to create and deliver the identified important value dimensions for the customer.

In the opinion of Asian Development Bank (2003), a company competitiveness can thus be examined as a function of factors such as: its own resources, its market power, its behavior toward rivals and other economic agents, its capability to adapt to changing circumstances, its capability to create new markets and the institutional environment, largely provided by the government, including physical infrastructure and the quality of government policies.

Different other authors have also tried to identify the determining factors of competitiveness at the company level, which they took into account in the elaborated analysis models. Thus, Schmuck (2008) builds a measurement index for the relative regional competitiveness of the companies in the South Trans-Danube Region, including in the model as variables: the workforce fluctuation as competitiveness destabilizing factor, the participation to alliances, the adaptation to changes and the alteration of the held market share. On his turn, Markus (2008) suggests a measurement possibility of the company competitiveness, starting from Porter's Diamond Model, identifying as influence variables of company competitiveness: the number of years since the company foundation, the financial perspectives, the lack of skilled experts, the cooperation with other organizations, the demand index, the trend of sale incomes and innovative activities.

We consider that the factors synthesized by Ternisien and Diguët (2001) for the company competitiveness assessment, respectively the dimension and intensity which it uses the sponsors' capital, the organizational capital, the human capital, the innovational capital and the capital represented by the customers portfolio, are relevant to analyze and explain the competitiveness advantage of a company in regard to another.

Thus, the company competitiveness is influenced by the diversification of the financing sources, by the sponsors' loyalty and availability to contribute to the support of development strategies, but also by the access to the less expensive financing resources.

The method of organizing the entry and exit flows together with the efficiency of the responsibility centres existing at the companies' level characterize the quality of the organizational capital. It can provide output increases and the value creation. The

autonomy of the responsibility centres which operate coordinately to achieve the pre-established competitiveness objectives provides the flexibilization of the decisional act. The flexibility of the organizational capital influence on the company capacity to react quickly to structural changes but also conjunctural changes arisen on the market.

The quality of the goods and services offered by companies is influenced by the level of training and social-cultural values characterizing the used human capital. It provides the competitiveness differential and is reflected in the performance increase in regard to the other competitor companies, contributing to the creation of added value and finally to the profit increase.

In order to respond to the change of the consumers' preferences and the predictable dynamics of the demand structure, the companies must develop and take advantage of the innovational capital they possess. The research – development activities are those which provide the existing technologies' improvement, the building of new technologies, the offer of new goods and services. But the existence of these activities depends on the capacity of attracting creative human capital and with spirit of initiative.

Capitalization of the market supply depends on the customer portfolio of the companies, on its loyalty but also the attraction of new customers. The competitive companies are those which manage to anticipate and respond to the customers' demand before others whom they compete on the market. Companies must attract customers with a good position on the market and to welcome their needs.

## **2.Empirical study regarding the determining factors of the Romanian companies competitiveness**

In order to identify and assess the factors determining the company competitiveness on the competitive market we have used the questionnaire method as method of research. The object of the applied questions was to test the managers' opinions regarding the factors determining the competitiveness of the companies they manage.

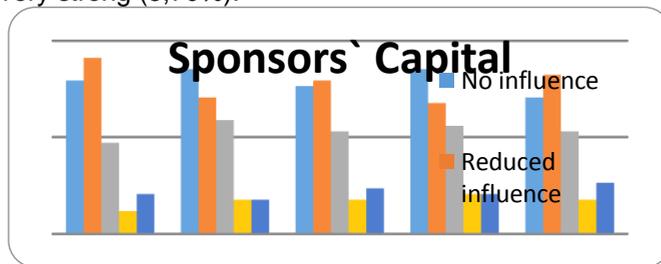
The competitiveness determining factors which made the object of the questionnaire explorative questions are synthesized by Ternisien and Diguet (2001) for the company competitiveness assessment, respectively the sponsors' capital, the organizational capital, the human capital, the innovation capital and the capital represented by the customer portfolio.

The assessment of the factors' impact on competitiveness was made based on the answers received from the respondent managers, by giving certain marks, such as: 1 = no influence; 3 = reduced influence; 5 = medium influence; 8 = strong influence; 10 = very strong influence. The time interval taken into consideration is 2008-2012. The initial sample of companies which we took into consideration consisted of a number of 300 Romanian companies. 127 managers answered to the applied questionnaires but because of the significant number of non-answers existing in their content, the sample was reduced to 85 companies which are part of 14 fields of activity provided in the NACE Rev. 2 classification.

The company classification on size classes took into account the following classification criteria: the number of employees, the annual net turnover and the value of the total assets held. Since for about 92% of the interrogated companies the cumulative criteria for the classification into a certain size class are not fulfilled, the single relevant criterion which could be held was the number of employees.

According to this criterion, the distribution of answers shows that from the total of 85 companies: 63 companies representing 72,12% of the sample are classified in the microenterprises' category, 14 companies representing 16,47% of the sample are classified in the small enterprises' category; 8 companies representing 9,41% of the sample are classified in the medium enterprises' category. The data was processed at the level of the entire sample and according to fields of activity, and the answers assessed through marks were transformed in relative sizes.

At the level of the entire sample, the influence of the sponsors' capital on competitiveness reflects an almost similar distribution of the respondents' opinions for the full analyzed period. The companies estimating that it has a reduced influence (31,29%) and no influence (29,94%) are preponderant. Only for an average of 21,41% of the companies, the influence of the sponsors' capital is a medium one and even more reduced is the number of those for which the influence is strong (6,83%) or even very strong (8,70%).



**Figure 1:** The influence of the sponsors' capital on the company competitiveness  
Source: data processed by the authors, according to the questionnaire

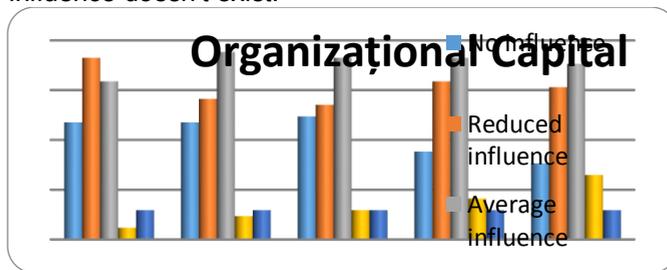
The analysis refinement at the level of the economy fields in which companies activate emphasizes differentiations between them regarding the influence exercised by the sponsors' capital on competitiveness. Thus, from the total companies activating in the *manufacturing industry* almost half of them (41,82%) confer to this factor a reduced influence while 29,09% estimate a medium influence. However, 18,18% of them consider that the influence is very strong and only 1,82% estimate that this factor exercises a strong influence, while 9,09% estimate that the sponsors' capital doesn't exercise any influence on their competitiveness.

Regarding the companies activating in *buildings*, almost half of them (43,33%) don't attach importance to the influence of sponsors' capital on competitiveness and a quarter of them (25%) attach a reduced importance. While 8,33% of the field sample estimate a very strong influence and 16,66% a strong importance, 6,68% of the companies estimate a medium influence.

The analysis of the answers received from the companies in field of *transport and storage* allows us to notice that for 23,64% of them the sponsors' capital has no influence on their competitiveness, for 40% of them it has a reduced influence and for 27,27% it has a medium influence. From the total companies of the sample, which activate in *wholesale trade or retail trade*, 27,36% estimate that sponsors' capital doesn't exercise any influence on their competitiveness, 34,73% estimate that it has a reduced influence and 24,22% a medium influence. Only 6,32% of the companies estimate the sponsors' capital as being a factor with a strong influence on competitiveness, while 7,37% of them confer a very strong influence to this factor.

We can notice a similar behaviour of the majority of companies developing *activities of administrative services and activities of support services, shows, cultural and recreational activities*, as well as those in the fields of *information and communications, real estate transactions and education*, these estimating that sponsors' capital doesn't exercise any influence on their competitiveness. As opposed to them, the dominant value of the companies developing *professional, scientific or technical activities, as well as the financial brokerage activities*, confer a reduced influence to this factor. The majority of the companies activating in the field of *health and social welfare*, as well as in the field of *production and supply of electricity and thermal energy, gas, hot water and conditioned air* estimate the sponsors' capital as being a factor with a medium influence on competitiveness while the majority of the companies in the field of *hotels and restaurants* confer a strong influence to this factor.

At the level of the entire sample, the influence of the *organizational capital* on competitiveness reflects a similar distribution in the first and the last two analyzed years, in comparison with the second and third year. Only 5,88% of the companies consider that the influence is very strong and 6,82% estimate that influence is strong. We notice the prevalence of the answers attaching a medium importance of 35,29%, followed by those for which, with an average of 30,82%, the influence is reduced and for 20,93% the influence doesn't exist.



**Figure 2:** The influence of the organizational capital on the company competitiveness

Source: data processed by the authors, according to the questionnaire

Analyzing this influence at the field level, we notice that in the *manufacturing industry*, more than a half of the companies (56,36%) confer a reduced influence to this factor and a quarter of them (25,46%) a medium influence.

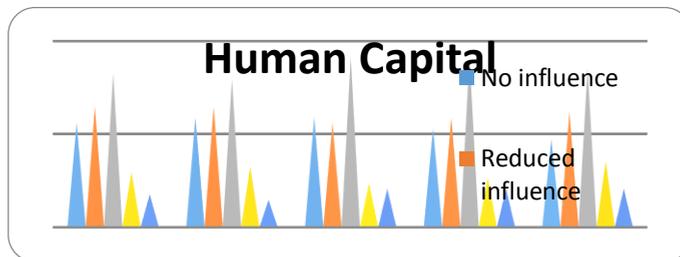
If the analysis reference is represented by the companies which activate in *buildings*, the majority of them (36,66%) doesn't attach importance to the influence of organizational capital on their competitiveness, and a quarter (25%) attach a medium importance. The companies attaching a reduced influence of the organizational capital on the competitiveness or confer a very strong influence to this factor, have equal values (16,67%).

The analysis of the answers received from the companies in field of *transport and storage* allows us to notice that for 25,46 % of them the organizational capital has no influence on their competitiveness, for 29,09% of them it has a reduced influence and for 36,36 % it has a medium influence. From the total companies activating in *wholesale trade or retail trade*, 18,95% estimate that organizational capital doesn't

exercise any influence on their competitiveness, the companies estimating in equal values (37,89%) either a reduced or a medium influence of this factor.

Regarding the majority of companies developing *activities of administrative services and activities of support services, professional, scientific or technical activities*, as well as those in the field of *hotels and restaurants, information and communications, the production and supply of electricity and thermal energy, gas, hot water and conditioned air, health and social welfare*, we can notice a similar behaviour, these attaching a medium importance to the influence of the organizational capital on competitiveness.

At the level of the entire sample, the influence of the *human capital* on competitiveness reflects an almost similar distribution of the respondents' opinions for the entire analyzed period. The companies estimating that it has a medium influence dominate with an average of 34,35%, followed with an average of 24,46% by those considering that the influence is reduced, while 21,87% consider that there is no influence. Only 11,77% of the respondents consider that the influence of the human capital on competitiveness is strong and even smaller is the number of those for which influence is very strong (7,53%).



**Figure 3:** The influence of the human capital on the company competitiveness  
Source: data processed by the authors, according to the questionnaire

At the field level, we observe the existence of certain differences regarding the influence exercised by the human capital on the company competitiveness. Thus, in the *manufacturing industry*, 41,82% of the companies confer a reduced influence to this factor, 30,90% of them confer a medium influence and 14,55% consider that there is a very strong influence.

The analysis of the companies in the field of *buildings* allows us to notice that for 30% of them the human capital has no influence on their competitiveness, for 11,66% of them it has a reduced influence and for 23,34% it has a medium influence. Relatively similar values hold companies attaching a strong importance to the influence of human capital on competitiveness (18,33%) or they confer a very strong influence to this factor (16,67%).

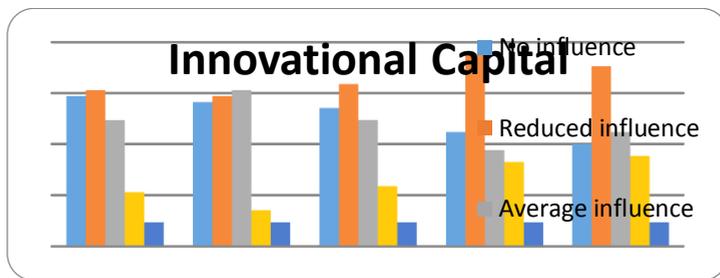
Regarding the companies activating in the field of *transport and storage*, almost half of them (40 %) attach a medium importance to the influence of human capital on their competitiveness, 21,82% of them attach a reduced importance and 27,77% of them don't attach any importance. For 10,91% of the companies the influence of the human capital is strong and at the field level there's no company in whose opinion the influence is very strong.

From the total companies of the sample which activate in *wholesale trade or retail trade*, 17,89% of the companies estimate that the human capital doesn't exercise

any influence on their competitiveness, 33,68% of them confer a reduced influence to this factor and the majority (37,89%) a medium influence. The companies conferring to this factor a strong influence or even a very strong influence on their competitiveness, have equal values (5,27%).

The dominant value of the companies developing *shows, cultural and recreational activities, professional, scientific or technical activities* but also the companies in the fields of *information and communications, the production and supply of electricity and thermal energy, gas, hot water and conditioned air, health and social welfare*, attach a medium importance to the influence of the human capital on competitiveness.

At the level of the entire sample, the influence of the *innovational capital* on competitiveness reflects a different distribution of the respondents' opinions in the first two years in comparison with the last two years of the analyzed period. With an average of 32,94% the estimation of a reduced influence is predominant and it is followed by an average of 25,41% referring to the lack of a influence on competitiveness. For 24,23% of the companies the influence of innovational capital is a medium one and even more reduced being the number of those for which the influence is strong (12,70%) or even very strong (4,70%).



**Figure 4:** The influence of the innovational capital on the company competitiveness  
Source: data processed by the authors, according to the questionnaire

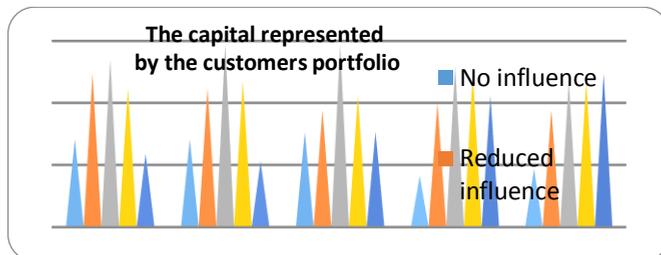
The analysis refinement at the level of the fields emphasizes differentiations between them. In the *manufacturing industry* almost three quarters of the companies (74,55%) confer to this factor a reduced influence and 10,90% of them estimate that this factor has no relevance for their competitiveness. For 3,65% of the companies the influence of the innovational capital is a medium one and even more reduced is the number of those for which the influence is strong (1,81%). The analysis of the companies in the field of *buildings* allows us to notice that for 38,33% of them the innovational capital has no influence on their competitiveness, for 5% of them it has a reduced influence and for 13,33% it has a medium influence. In this field, 26,67% of the companies estimate a strong influence of this factor on their competitiveness and 16,67% of them estimate it has a very strong influence.

From the total companies activating in the field of *transport and storage*, 29,09% of them estimate that the innovational capital doesn't exercise any influence on their competitiveness, and the majority (38.18%) consider there is a reduced influence of this factor. In equal values (16,36%) the companies estimate either a medium influence or a strong influence. None of these companies activating in this field estimates that this factor exercises a very strong influence on competitiveness.

Regarding the sample companies which activate in the *wholesale trade or retail trade*, 25,26% of them estimate that the innovational capital doesn't exercise any influence on their competitiveness, the majority (34,74%) confer a reduced influence to this factor and 32,63% a medium influence. The companies conferring to this factor a strong influence (2,10%) or even a very strong influence (5,27%) on their competitiveness, have lower values.

Regarding the majority of the companies which develop *activities of administrative services and activities of support services, professional, scientific or technical activities*, as well as those belonging to the fields of *hotels and restaurants, information and communications, production and supply of electricity and thermal energy, gas, hot water and conditioned air*, we can notice a similar behaviour, these attaching a medium importance to the influence of innovational capital on competitiveness. The dominant value of the companies developing *shows, cultural and recreational activities* or activities in the fields of *education, real estate transactions, health and social welfare* estimates that their competitiveness is not affected by the innovational capital, while most of the companies in the field of the *financial brokerage* consider that the innovational capital exercises a reduced influence on their competitiveness.

At the level of the entire sample, the influence of *the capital represented by the customers portfolio* on competitiveness reflects an almost similar distribution of the respondents' opinions for the full analyzed period. We notice the prevalence of the companies attaching a medium influence of this factor (with an average of 27,05%) followed by those for which the influence of this factor is strong (with an average of 22,82%) and then, by those for which the influence is reduced (with an average of 20,94%). Only for 12,23% of the total sample companies, the capital represented by the customers portfolio doesn't exercise any influence on their competitiveness, while for an average of 16,70% of them the influence of this factor is very strong.



**Figure 5:** The influence of the capital represented by the customers portfolio on the company competitiveness

Source: data processed by the authors, according to the questionnaire

The analysis at the field level emphasizes the existing differences concerning the influence exercised by the capital which is represented by the customers portfolio on the company competitiveness. Therefore, in the *manufacturing industry* there haven't been identified any companies estimating that this factor has no influence on their competitiveness. Most of the companies in this field (38,18%) confer a reduced influence to this factor and about a quarter of them (25,46%) confer a strong influence. In equal proportions (18,18%) the companies in the manufacturing

industry estimate either a medium influence or a very strong one for the capital represented by the customers portfolio on their competitiveness.

The analysis of the companies in the field of *buildings* allows us to notice that for 25% of them the capital represented by the customers portfolio has no influence on their competitiveness, the same value having as well those attaching a strong importance to the influence of this factor, The companies of this field which estimate a very strong influence of the capital represented by the customers portfolio on competitiveness represent 23,34%.

From the total companies activating in the field of *transport and storage*, 18,18% estimate that the capital represented by the customers portfolio doesn't exercise any influence on their competitiveness, 23,66% consider that it has a reduced influence and the majority (32,71%) estimate that this factor has a medium influence. None of the companies activating in this field estimates that this factor exercises a very strong influence on competitiveness.

Regarding the sample companies which activate in the *wholesale trade or retail trade*, 6,32% of them estimate that the capital represented by the customers portfolio doesn't exercise any influence on their competitiveness, 26,32% of them confer a reduced influence to this factor and the majority (33,68%) a medium influence. The companies conferring to this factor a strong or even very strong influence on their competitiveness, have equal values (16,84%).

We can notice a similar behaviour of the majority of companies developing *activities of administrative services and activities of support services, shows, cultural and recreational activities, or professional, scientific or technical activities*, these estimating that the capital represented by the customers portfolio exercises a strong influence on their competitiveness. Taking into consideration the relatively reduced number of the sample companies, we estimate that the results cannot be extrapolated / generalized but we consider that they are relevant as a tendency for the microenterprises, small and medium enterprises from certain analyzed economic fields, namely trade, buildings, manufacturing industry, transport and storage, where the samples of received answers are more significant quantitatively. We observe that most companies consider that the influence of the analyzed factors on competitiveness is medium and respectively reduced, while a small number of questioned factors estimate that these exercise a strong and very strong influence. Among the analyzed factors, the organizational, human capital and the customers portfolio are considered by the respondents, in a more significant extent, to influence the market competitiveness of the managed companies. The estimation concerning the lack of the sponsors' capital influence is surprising because without it neither the company existence and obviously nor the enforcement of certain policies in order to encourage competitiveness are possible. Such an answer determines us to consider that there is a dangerous deficiency of professional competence at the managers' level.

### **3.Conclusions**

The structure analysis of the sample reflects the dominance of the microenterprises which are followed at a long distance by the small and medium enterprises. We consider that the managers of the small sized companies as well as those in the held sample are based on a predominantly intuitive management, dealing the administered businesses based on the spur of the moment inspiration, making decisions subjectively not starting from objective economic criteria. They are

concerned only with the management of the current problems. Since they aren't the beneficiaries of a managerial education, they don't possess the necessary competences to focus on the elaboration of certain strategies by which to provide competitiveness and performance on the long-term. The managers' competence influences on the designing, promotion and application of a strategic vision which is capable to provide the economic competitiveness and the financial performance of the companies. Practically, the human capital is the one which identifies and activates the others determining factors of competitiveness.

In conclusion, we estimate that the maintenance and consolidation of the company position on the market are influenced by the structure optimization of the capitals derived from external shareholders and sponsors, but also by the way in which these are targeted for the fulfillment of research – development activities which generate new technologies and products creating a big added value, the fulfillment of strategic, development and updating investments, but also by the training level of the employed human capital. As a matter of fact, the flexibility of adaptation to the changes appeared in the demand structure depends on the innovational act. On its turn, the market share depends in the first place on the degree in which the offer of goods and services corresponds to the customers' consume preferences, so on the offer diversification and adaptation capacity, and on the companies' reaction to the signals transmitted by the market.

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# STUDY ON THE PLACE OF ROMANIA IN THE HEALTH SYSTEM OF THE EUROPEAN UNION

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**Abstract:** *This study aims to present the concept of public health and the place of Romania in the health system of the European Union. The concept of public health grew rapidly throughout the European Union from a strict approach to health conditions in a comprehensive approach to the health of the population, living standards and a more healthy life, even amid economic crisis that affected the whole of Europe.*

*Policy makers have made considerable efforts to ensure access to high quality medical assistance facing challenges rarely encountered in other parts of the world, such as aging population, the use of more effective drugs and some more advanced technology.*

*In order to position Romania in the EU context, we used a comparative analysis, using a number of indicators, such as total health expenditures in GDP and per capita, and life expectancy at birth, number of hospital beds and number of doctors/100,000. The result in most indicators showed that Romania is in an inferior position, except the indicator number of hospital beds. However, in this case we must take into account that we had data published by the World Bank in 2010, and the following year they abolished a total of 67 public sector hospitals.*

*These conclusions are all the more disappointing, because throughout Europe during the crisis was drastically reduced the budget spending on health, which affected both the public and private health. In this regard wages were reduced, they stopped hiring in the public sector, and healthcare staff migrated in search of higher incomes and better working conditions.*

*Successful experiences of the EU members countries have shown that some types of social policy and investment strategy in education in general and education for prevention and sanitary behavior in particular, lead to a long term positive impact on population health.*

**Keywords :** *health care, the budget, doctors, life expectancy, hospital beds.*

**Codes JEL:** *F52, H51, I18*

## 1. Introduction

Ensuring access to adequate health care is a fundamental policy objective in all Member States of the European Union, and in this respect, in the last 30 years, health system resources, experienced steady growth. Increasingly, there are concerns in many European countries about the lack of doctors and nurses, although recent cuts in public health expenditure in some countries at least temporarily reduced the demand.

By 2009, health spending in GDP in European countries grew at a faster pace than the growth rate of economic growth. Following the financial and economic crisis in 2008, several European countries were forced to cut health spending. This has had a devastating impact on the fundamental objectives of health systems- putting

additional pressure on many European countries health system. Public health spending cuts were made through a series of measures which included: reducing wages and / or employment levels, increasing direct payments made by the population for certain services and pharmaceuticals, and the imposition of hard budget constraints on hospitals. Also, mergers between hospitals were made by the officials by stopping the ones declared inefficient or by accelerating the change from inpatient care to outpatient care.

Starting from these considerations we attempt to make a comparative study of EU countries and Romania, considering a selection of new indicators considered relevant to characterize the health system of a country.

## **2. State of knowledge**

"Health is a characteristic of an inalienable good and it resembles in a small extent with other forms of human capital such as education, professional skills and sports performance. It is subject to important and unpredictable risks which confirm that health is entirely different from all other goods that people insured against theft or hazard and that is why sickness insurance is more complex than any other type of insurance." (Constantin and Ganescu. 2009:51)

"Having good health is an essential element to quality of life, element indicated by people" (Delhey 2004:6). Bogdan Voicu (2005:27) and Cosmina Elena Pop (2010:7) consider human capital as consisting of two components: "educational capital (skills acquired by individuals in training school but also outside it) and biological capital (physical abilities of individuals, synthesized, most often in health). "After joining the EU, the state of population health and health services in other Member States has become a reference point for our country. Health reforms are initiated by three major factors: poor health of the population, dissatisfaction of actors in the system and reduced performance of the system, as shown in international statistics." (Vlădescu, Astărăstoae and Scintee 2010:8)

In view of better determining the health state "Indicators meet the need for deeper understanding of phenomena and interrelations between them, which otherwise escapes understanding. They sum and associate data of monitoring and surveillance systems so that they can provide answers to questions relevant to the planning and management of health problems." (Dragoi 2008:3) Among these indicators, a priority is given to lifespan. This "rose in the EU, so did the share of the aged population (the main consumer of services in the total population).

All these fiscal pressures make the developed countries to provide new sources of financing, the most efficient management of existing resources or alternative ways of organizing services (a mix of private and public) (Cristina Tomescu 2009:5).

Another indicator for the health state is the number of physicians and the distribution thereof. In most countries, the number of specialists is higher than the generalists "This can be explained by a lower interest in the traditional practice of generalist medicine (family doctors), given the workload and the constraints attached to it. In addition, in many countries, the pay gap between generalists and specialists is quite high (Fujisawa and Lafortune 2008:27). "

"Migration of Romanian doctors is a current component of the more general phenomenon of labor migration from Romania having relevant socio-economic effects on public health. The level of remuneration of medical personnel in Romania can be considered a "push" factor of migration, valid not only for physicians but also for other medical staff.

Job satisfaction of physicians, in terms of income earned, is dependent on the level of economic development of the country” (Dornescu and Manea, 2013:134). In conclusion, Phillips (2006:16) believes that "a society can be differentiated by another in terms of quality of life in that society if people live longer, healthier and fullest life than in another community."

### **3. Research Methodology**

This paper combines qualitative and quantitative research, using specific methods, document analysis and content analysis. To achieve the objectives we used a series of bibliographical sources which consist of books, accounting rules, tax and legal studies and articles published in various national and international organizations in the field. Thus, we collected data from the World Bank, the National Institute of Statistics and Eurostat in order to make a comparative analysis, focus group type, in terms of health care, the EU-Romania, in 2010.

Thus, we used these variables, considered by us to be illustrative of a state health system dynamics:

- total health-spending in GDP
- Health expenditures per capita
- Life expectancy at birth
- number of hospital beds per 100,000 inhabitants
- number of doctors per 100,000 inhabitants

### **4 Results of data analysis**

System by which funds are generated and allocated in European health care system is very complex and varies from country to country. In most EU countries it is used a system consisting of government funding of health and social security contributions, resources continuously increasing in most Member States in the last 3 decades.

Some of the most important factors behind this growth were aging of population, increasing the number of persons receiving medical assistance, and the discovery of more effective drugs and advanced technologies.

In this respect, we prepared a table of health system indicators with data recorded in the year 2010.

#### ***Table 1. Indicators of the health system***

Country	Health expenditure in PIB (%)	Life expectancy (years)			No of hospital beds for 100.000 inhabitants	No of doctors for 100.000 inhabitants
		Women	Men	Average		
UE-27	10,3	82,9	77	79,95	538,2	340
Belgium	10,5	83	77,6	80,3	644	292
Bulgaria	7,2*	77,4	70,3	73,85	661,6*	371,1
Rep. Czech	7,5	80,9	74,5	77,7	701	358
Denmark	11,1	81,4	77,2	79,3	349,8	350
Germany	11,6	83	78	80,5	824,8	373,1
Estonia	6,3	80,8	70,6	75,7	533,1	323,5
Ireland	9,2	83,2	78,7	80,95	313,9	310
Greece	10,2	82,8	78,4	80,6	484,8*	610
Spain	9,6	85,3	79,1	82,2	315,7	377,9
France	11,6	85,3	78,2	81,75	642,4	330
Italy	9,3	85	79,8	82,4	352,5	370
Cyprus	7,4	83,9	79,2	81,55	368	310,7
Latvia	6,8*	78,4	68,6	73,5	532,4	291,1
Lithuania	7	78,9	68	73,45	675,1	372
Luxembourg	7,9*	83,5	77,9	80,7	536,7	277,3
Hungary	7,8	78,6	70,7	74,65	718,2	286,9
Malta	8,6	83,6	79,2	81,4	450,5	307,5
Netherlands	12	83	78,9	80,95	465,7*	290
Austria	11	83	77,9	80,45	762,9	478
Poland	7	80,7	72,1	76,4	658,5	217,9
Portugal	10,7	82,8	76,7	79,75	334,7	380
Romania	6	77,6	70,1	73,85	628,5	236,9
Slovenia	9	83,1	76,4	79,75	457,2	243
Slovakia	9	79,3	71,7	75,5	641,8	330
Finland	8,9	83,5	76,9	80,2	584,7	330
Sweden	9,6	83,6	79,6	81,6	272,6	380
Unit. Kingdom	9,6	82,6	78,7	80,65	295,5	271,2

\* 2010 data were not available we used 2009 data  
 Provided by authors, source Eurostat, World Bank

### Total expenditure on health

These include the provision of health services (preventive and curative) and emergency medical aid, family planning, nutrition.

Health insurance contributions are made on their income and their pay is split between employer and employee, there are still relevant differences between EU countries in terms of uniformity and variability of rate, distribution between employer and employee, the existence of an upper limit to the contribution existence of other types of contributions outside of the salary. In countries like Germany, Austria, Holland contributions have upper limits.

In France, in order to develop the base of funding, the amount for the employee was replaced by a general social contribution which is not based on wages. In most EU countries, the distribution between employee and employer is in favor of the employees, employers paying between 70-90% of the contribution. However, in countries like Romania, Austria and Belgium, the distribution of employee / employer is almost equal. Private insurance system is a health supplement that provides additional coverage for services not covered partially or fully by the social ones. Percentage of GDP (Table 1) allocated to Health recorded variations from country to country. Calculated as a percentage of GDP, total health expenditure is, in Romania, 6%, the lowest percentage allocated to the health of the countries with available data. Within the EU, health spending varies from 7.2% in Bulgaria and 12% Netherlands.

Romania has allocated total health expenditure in the period 2005-2010, 44% lower than the EU average, but the situation is even more critical in terms of actual

expenditure on health per capita, which stood at a value of 19.56% compared to the EU. Analyzing this indicator it was observed that Romania spends the lowest amount per capita in EU countries.

### **Life expectancy at birth**

Indicator of the health of the population, "opposite" of mortality, life expectancy targets the average life of an individual

Life expectancy at birth, also called disability-free life expectancy is an indicator that reflects the state of good health, combining information on mortality and morbidity in the population. It shows the number of years that a newborn can live them, respecting the same lifestyle up to death. . It (Table 1) increased in the EU, so did the share of aging population in the total of population. Along the Baltic countries, Bulgaria and Romania are among the countries with the lowest life expectancy among EU countries.

Romania with a hope of only 77.6 years for women and 70.1 years in men is on the last place in the EU, compared to the EU average 79.95 years. Women in Romania live 8.2 years less than those in France, considered the oldest women in Europe. At the level of the entire population, in Spain, France and Italy the hope is noticeably higher than the EU average. Although the general trend is increasing, in 2010, life expectancy in the EU has decreased compared to 2009, due, undeniably to global economic crisis. Inequalities between women and men in terms of life expectancy at birth are very different across countries, being more pronounced in the Baltic countries (over 10 years) and in South-Eastern and Central Europe (between 6-9 years).

### **Number of hospital beds per 100,000 inhabitants**

Number of hospital beds (Table 1) is an indicator affected by the state of health of the population, the average days of hospitalization, rate of hospitalization, treatment complexity, technical resources and outpatient treatment.

Romania has the highest rate of hospitalization in the EU, 215.13 admissions per thousand inhabitants, while the Netherlands recorded the lowest rate of hospitalization, with 109.3, followed by England - with 128.7, and France - 171.5.

In 2010, the EU, the average number of beds was 538.2, with 101.9 fewer than in 2000. This indicator varies from state to state, from 272.6 in Sweden, to 824.8 in Germany. In the period 2000 - 2010 the number of hospital beds has decreased, in each Member State, except Greece. The largest decreases were registered in Ireland, Finland, France, Slovakia and Romania. These reductions may reflect, among other things, economic constraints, increasing efficiency through the use of technical resources (e.g. imaging equipment), and a general shift from inpatient to outpatient operations and shorter periods in hospital after an operation.

In Romania in 2011, as a result of structural changes in the health care system, by stopping funding for a total of 67 hospitals in the public sector, the number of beds decreased with 3503. The public and private units for 2012 were approved with less than 2862 beds in 2011, although five hospitals were reopened. This is due to rehiring specialist doctors, complexity of medical services offered, addressing, trying accessible hospital services for the insured and balanced functioning of all hospitals.

### **Number of physicians per 100,000 inhabitants**

Many EU countries are concerned with the lack of current and future physicians, especially some doctors in respective categories. In almost all EU countries, the balance between general practitioners and medical specialists changed, increasing the number of specialists.

Slow or negative growth in the number of general practitioners raised concerns in the European Union countries in access to primary care for the population.

In 2010, Greece had by far the highest number of doctors per capita, 610, almost twice the EU average of 340 (Table 1). Number of doctors was also relatively high in Austria, Norway, Portugal, Sweden, and Spain. The lowest number of doctors is found in Slovenia, followed by Romania and Poland.

The problem of Romanian doctors' migration is that some doctors are renowned specialists and prestigious academics and their departure means the loss of super-qualified professionals and mentors of future generations of physicians.

The level of remuneration of medical personnel in Romania can be considered a "push" factor of migration, valid not only for physicians but also for other medical staff. Job satisfaction of physicians in terms of income earned is dependent on the economic development of the country and can be determined by comparing individual physicians' gross income to average wages in total economy. Level - already very low - of the remuneration of medical personnel was affected by the economic crisis austerity measures taken by the Government.

## 5. Conclusion

Health is an area of major social impact, which may provide evidence for the adoption of policies, it representing fundamental value both for individuals and for society. The health system has been for a long time in a state of prolonged crisis and public health issues and challenges of the Romanian medical system are long-term problems whose consequences will be felt in the future.

Low living standard of the population and lower health system resources are the prime causes of health of the population of Romania. Although, in the period 2003-2010, Romania grew significantly by 140.6% total health expenditure per capita, though we are in last place in Europe in the year 2010 with only 353.4 euro / capita, being surpassed by all members of the communist camp about 2-3 times. The economic crisis that hit the entire European Union, health spending in some countries was reduced by cutting public spending (France, Sweden, Finland, Germany). Reducing salaries, stopping hiring in budget inflexibility, unemployment are just a few factors that affected population and standard of living leaving its mark on both public health system, and especially private, throughout Europe.

Both objective indicators and subjective ones place Romania among the EU countries with poor health status. The data indicate health as a key area requiring intervention by social policies and the lack of an effective investment in reducing urban-rural disparities in the provision of public services and reduced financial involvement in initiating effective programs for public health / prevention are important points that emphasize differences.

Financial disparities between the rich and poor investment explains deficiencies in poor areas. There was no effective policy to attract, by financial incentives serious medical personnel in rural areas.

Improving the health system in Romania is related to the economic development of the country, and therefore a long-term problem. In this context, we must consider a range of policies to target by high financial involvement the main weaknesses of health in Romania: better care of mother and newborn, investing in children and in education for prevention, primary care in rural area.

All these measures will impact life expectancy (73.85 years) and therefore the proximity to the European average (79.95), knowing that for this indicator we stand

in last place in Europe. First on the list of causes of death in Europe is due to cardiovascular disease (heart attack and stroke), followed by oncologic diseases, suicides and traffic accidents.

Economic development is another important factor that led over the past six decades to a dramatic increase in life expectancy and quality of life in developed countries.

Developments in medical equipment and drugs, healthy eating, providing sanitation, public information on prevention / treatment, were also an important factor that helped this growth. Women live longer mainly because they are more attentive to symptoms and go to the doctor more often, counting more on prevention and are less involved in highly dangerous work.

In the period 2007-2012, in Romania there have left to work in other countries 12,214 physicians and specialty exam was passed only by 6,200 aspirants. Therefore, in Belgium, of all the doctors entering the workforce each year, one in eight is Romanian. This is due to several factors, such as higher wage, working conditions, technical equipment.

Resource allocation in the system should be redesigned in the sense of investing more in rural primary care. Also other dimensions of the system should be reconsidered in order to increase quality of care and public access to it. In this sense, the destruction of hospitals in 2011, has reduced the number of beds, where Romania was ranked 10th in Europe, well above the EU average and hence the number of physicians, where Romania is a disgraceful place 26. The measure, potentially beneficial in the global level, but only erratically enforced deepen the crisis in the system, a large number of doctors and nurses migrating to other countries where the income is over 3 times higher and working conditions are better.

Economic development will solve many of the problems that Romania is facing, bringing improved health and quality of health services offered. Successful experiences of countries member EU have demonstrated that some types of social policy as well as a strategy for investment in education in general and education for prevention in particular, lead to long-term positive impact on population health.

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# ESTIMATING QALYS IN THE WESTERN REGION OF ROMANIA – THE CASE WITH INTERVENTION

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**Abstract:** *Currently, we are in the process of experimenting a diversification and refinement of the consumer's expectations, as well as a growing demand for innovative, quality products and customized services, exacerbated by rapid technological change affecting both them and the producers. It is also the case of health services that, with Romania's accession to the EU, must align to the European requirements. In the context of limited public resources and growing healthcare needs, socio-economic criteria are necessary for substantiating allocation decisions. With the continuous increase in costs of medical interventions but also the expansion of the range of treatment options available, there is a need to develop and use a range of tools to help establish treatment adopted in the context of justifying the benefits resulting from its implementation. In health, the greatest difficulty for the documentation of investment projects is the main overall effect measurement and evaluation - improving quality of life. Although treated in the literature in terms of specialized clinical trials, there is not currently a methodology to address the economic evaluation of investment projects in health. In this sense, our study's objective is to develop and test a framework to estimate the most appropriate indicator that assesses improvements in quality of life due to healthcare investment projects. We have started with an extensive literature review that allowed us to identify the most recommended indicator in this sense - quality adjusted life years (QALYs) and also to develop and test a conceptual framework. We then realized a survey on 131 medical professionals from the Western Region of Romania, for the two main medical causes of decease, and based on the information collected we calculated the QALYs following a medical intervention. The values obtained reflect the impact of healthcare interventions in terms of quality of life improvements and have a high informational content being useful for those involved in policy making and building institutional capacity in terms of public resources allocation.*

**Keywords:** *cost-benefit analysis, economic analysis, public healthcare, quality adjusted life year, quality of life.*

**JEL classification:** *D61, H43, I15, I18, I31, J17, O22.*

## 1. Introduction

The addressed issues arise from the current situational context in terms of funding needs of the national public service sectors (especially health sector) due to limited public resources and allocation decisions in the absence of clear and socio – economic grounded criteria.

Romania's accession to the European Union (EU) in 2007 has rendered health and health services offered to the member states of the EU to become a frame of reference for Romanian citizens. Currently, the Romanian health system responds

inefficiently to the major health problems of the population, the financing of the health system being characterized by an inefficient use of resources.

A key issue in addition to underfunding is the arbitrary use of resources, the inequitable allocation between different regions, types of health services and even between different health institutions. Since new treatments and interventions are rarely more effective and less expensive than previous approaches, developing tools to guide decision making on health resource allocation process has become imperative in this regard.

In the context of healthcare valuation, specific methodologies have been developed, the most appropriate being the cost - benefit analysis (CBA). Cost-benefit analysis method is seen in the literature as a method of economic evaluation of social impacts of investment projects (especially those in the public domain) in areas such as health, education, environment, industry, transport, tourism and agriculture. In health, the greatest difficulty for the documentation of investment projects is the main overall effect measurement and evaluation - improving quality of life. Although treated in the literature in terms of specialized clinical trials, there is not currently a methodology to address the economic evaluation of investment projects in health. In this sense, our study's objective is to develop and test a framework to estimate the most appropriate indicator that assesses improvements in quality of life due to healthcare investment projects.

In order to fulfill the paper's objective, we have started with an extensive literature review, approaching the topics of healthcare economics, cost benefit analysis and quality of life and their study in the specific literature which allowed us to develop and test a conceptual framework.

Even though the originality of our research does not rely on the method applied (questionnaire survey), our results and conclusions have a high informational content and can be useful for those involved in policy making and public resource allocation decision makers.

## **2. Literature review. Theoretical framework**

The scientific concerns on the issue of cost-benefit analysis and its implications on the decision to fund a social project with environmental impact can be found in the literature since the early nineteenth century, yet it still is the subject of a continuous research due to uncertainties and difficulties identified in the background of the methodology especially in the case of healthcare interventions.

Thus, the research's starting point is health economics, a field of economics that studies what health is and what is its value (Evans and Lipp, 2009).

Recent research in health economics are focused on studying the opportunity of the state's intervention in the health sector by (Shiell et al., 2002, Buxton et al., 2004, Cyril and Nason, 2009):

- Ensuring the volume of medical services for which the effectiveness is demonstrated by clinical records and by improving the health safety of patients (micro-level perspective);
- Ensuring the volume of medical services at the lowest cost per unit of effect, recognized as effective in terms of technical equipment and in terms of the existence of medical staff;

- Providing resources according to actual healthcare needs, leading to the realization of the best value in health insurance by allocating those resources on the basis of effectiveness and medical priority.

Research interest in the health economy soared despite previous theories that the health resources should not be limited because in the future available resources will be sufficient to meet health care needs (Fuchs, 1986). This guidance is based on public resource allocation issues as public bodies are operating in both restrictive constraints of public resources and what is socially acceptable and economically feasible.

From this point of view, the cost - benefit analysis method provides information to substantiate the allocation of resources in order to maximize the health of the population (Borghi, 2008).

Recently, the research efforts have focused on this area, being driven by the possibility for public bodies to access national European structural funds to develop public services, being as such imposed the development of cost-benefit analysis (whose binding is derived from official documentation required in this case) starting from a well-established theoretical basis.

The need for health economic evaluation is outlined also by economic consequences of poor health status since health contributes to social welfare as follows: individuals prefer health status as high (thus health directly affects utility); consumption of goods and services is partly influenced by health (corresponding marginal utility of consumption is partly a function of health status); in lack of a high health status, other economic objectives - such as revenue growth to ensure access to goods and market services - may be compromised.

These observations underline the ways in which health problems can influence in a negative manner choices and preferences of households, businesses and governments aiming to maximize welfare.

In the public sector, and thus public health sector, cost-benefit analysis aims to appreciate the impact of governmental activity on the welfare of society in general and individuals and groups, in particular, taking into account ethics and efficiency issues in evaluating any project (Robinson, 1993).

In the public sector, public choice is oriented towards the interests of the majority and thus it affects the economic efficiency of human activity. In order to improve the economic performance of a society, public interventions are required.

But often these actions can cause negative socio - economic effects, suggesting the need to substantiation decision making process by undertaking a cost - benefit analysis.

The interest of the research results from the large number of papers published in the literature and from the international organizations' surveys that propose the determination of the impact a cost-benefit analysis has on the decision to implement a project regardless of the target (either public or private).

Thereby, from the relevant international and national studies, we have identified a set of guidelines and recommendations for developing CBA which although contain sector-specific elements required to be applied, follow the same methodology regardless of the issuing body (table 1).

**Table 1: Guidelines for CBA**

Author(s)	Guideline
International CBA guidelines	
Department of Health, England, 2006	<b>Cost Benefit analysis of health impact assessment - final report</b>
Department of Finance and Administration, Australia, 2006	<b>Handbook of Cost Benefit Analysis</b>
Treasury Board, Canada, 2007	<b>Canadian Cost-Benefit Analysis Guide: Regulatory Proposals</b>
European Commission, 2008	Guide to Cost - Benefit Analysis of Investment Projects
Department of the Army, 2011	Cost - Benefit Analysis Guide
<b>National CBA guidelines</b>	
North-East Regional Development Agency, 2004	Guidelines in elaborating a cost-benefit analysis for projects with European funding
Ministry of Finances, 2008	The National Cost - Benefit Analysis Guide

For healthcare interventions, currently there is no common understanding regarding the evaluation of the most important impact or benefit of these projects – citizens' quality of life. Measuring quality of life and survival not only allows on the one hand that patients, physicians and policy makers choose between curative intent treatment options without mitigating side effects or alleviating symptoms without healing surplus worth in life expectancy, and on the other hand, to choose between two treatments with similar survival benefits but with different side effects.

However, numerous studies and researches identify as a quality of life measurement indicator – quality adjusted life years (QALYs).

Defined as a summary measure of health outcome for economic evaluation, which incorporates the impact on both the quantity and quality of life (Whitehead and Shehzad, 2010), the concept was first used by Zeckhauser and Shepard (1976) in the context of public policy evaluation topics and developed by Klarman et al. (1968) through an assessment of the effectiveness of dialysis study. It was Pliskin et al. (1980) that defined the term in the sense discussed today, therefore helping to demonstrate the usefulness of a medical intervention.

The paper's goal is therefore to propose a methodology to estimate the quality of life indicator identified – quality adjusted life year (QALY).

### 3. Research methodology

#### 3.1. Research problem and hypothesis

The use of QALY in the economic analysis of health investment projects suppose an answer to the following research question: What is the number of QALYs gained for each medical specialty through health interventions?

It should be noted that there is no common opinion in the national but especially international research on this topic regarding such an approach, we only identified disparate estimates for QALY for specific medical conditions (for example Miller et al., 2009).

Since determining the QALYs gained through health interventions necessitates a

prior determination of the number of QALYs when no intervention is considered and the QALYs with intervention, in this paper we concentrated our efforts in identifying the number of QALYs when interventions are considered. Our prior research in this field aimed at determining the number of QALYs in the case without intervention (Pantea and Gligor, 2012a). As such, the research hypothesis is the following: The number of QALYs with intervention is higher than the number of QALYs without intervention.

### **3.2 Survey design**

Our following concern was to identify the research method that enables testing and validating the assumptions in the context of the paper's objectives. Thus, following an analysis of the methods indicated by the literature review, we conducted a quantitative research, the instrument used for data collection being the questionnaire.

As stated by Pantea and Gligor (2012b), to estimate the number of QALYs for a group or a population the following types of information are needed:

- Descriptions of the various types of perceived health status in life;
- The duration of each health state;
- Estimation of utilities for each state for a group or an analyzed population.

With regards to the medical conditions that we included in our research, we started with an analysis of the statistical information provided by the Newsletter No. 11 of 2011 of the National Center for Public Health Statistics and Informatics which sets out the causes of death by age and gender of the population. Thus, we selected for this research only the first two main causes of death in Romania – diseases of the circulatory apparatus (60% of total deaths) and tumors (20% of total deaths), the selection criterion being the disease with the highest percentage in total deaths.

A second point of interest was to determine a common scale for both medical conditions in terms of evolutionary stages since each condition's stage is different in features and pathology. The objective was to create a common framework that allows comparisons between medical specialties, which we developed as follows (Pantea and Gligor, 2012b):

- Stage 1 - the initial stage: the first signs of disease onset, when medical interventions are often completely noninvasive and determine a complete recovery;
- Stage 2 - the advanced stage: requires invasive interventions which sometimes cause a partial or complete treatment of the disease;
- Stage 3 - final stage: reserved prediction, reduced ability to use medical interventions.

Based on the informational needs, we have developed the investigating tool necessary to achieve the established objectives that ensures the collecting of all the mentioned data.

Thereby, we developed a questionnaire that approaches two informational needs: on the one hand, respondents' perception regarding patients' quality of life after medical intervention and the identification of the associated quality of life utility in the three stages of the two diseases analyzed.

The target population consists of medical professionals since they are the only ones able to assess from a medical standpoint and in an objective manner the patients' quality of life after medical interventions. Restrictions of high amplitude and resource consumption in analyzing the total target population, led to a smaller sample population represented by healthcare professionals working in major hospitals in

the Western region of the country.

In table 2 we illustrated the process of operational definition of the questionnaire's variables.

**Table 2: Operational definition of variables**

Questionnaire theme		Variable	Variable operational definition
Perception of patients' quality of life after medical interventions	Diseases of the circulatory apparatus – Stage 1	Health state utility	0 – Worst health state 1 – Best health state
	Diseases of the circulatory apparatus – Stage 2	Health state utility	0 – Worst health state 1 – Best health state
	Diseases of the circulatory apparatus – Stage 3	Health state utility	0 – Worst health state 1 – Best health state
	Tumors – Stage 1	Health state utility	0 – Worst health state 1 – Best health state
	Tumors – Stage 2	Health state utility	0 – Worst health state 1 – Best health state
	Tumors – Stage 3	Health state utility	0 – Worst health state 1 – Best health state
Respondent's profile		Profession	Medical doctor
			Resident physician
			MD
			Medical specialist

In order to demonstrate the reliability of the measurement scales, we calculated the  $\alpha$  Cronbach coefficient and obtained an average of 0.77. Since sociological surveys consider satisfactory a value higher than 0.7, we demonstrated the reliability of the proposed scales.

On the basis of information on the utility associated with quality of life after surgery and considering time as life expectancy in Romania (values for 2011), we can calculate QALY for the case with intervention using formula 1.

$$\text{QALY with intervention} = \sum_{t=a}^{a+L} Q_t^i \quad (1)$$

where,

t – time period;

a – age;

$L^i$  - the period over which the individual enjoys the benefits of treatment;

$Q_t^i$  - a vector of health-related quality of life weights predicted (or observed) for each time period  $t$  following the intervention.

#### 4. Data analysis and results

The process of data collection was realized by direct research, which allowed us to eliminate the risks related to invalid questionnaires and to ensure the defined sample volume. The data was collected from January to February 2013 and processed using SPSS 17. Out of 150 questionnaires delivered to 10 major medical units from the Western Region of Romania, we collected 131 valid questionnaires, thus a 87% response ratio.

The investigated population analysis according to the variable 'profession' reflects a following structure: 22% medical doctors, 23% resident physicians, 29% MDs and 26% medical specialists.

The starting point in processing the collected data was to establish their homogeneity level by calculating for each variable the central tendency indicators (mean, median, mode) and dispersion indicators (minimum, maximum amplitude, variance, standard deviation). The results obtained indicate a high homogeneity of data as amplitude, variance and standard deviation values are below one and close to 0. The fact that the values of mean, median and mode indicators are approximately equal underlines the symmetry in data distribution and justifies the use of their average values in determining the utility for each stage of the medical conditions considered.

Identification of time spent in each stage was based on the increase in life expectancy percentage due to medical interventions that each respondent identified according to specified criteria.

After calculating tendency and dispersion indicators, the results obtained allowed assessment of the increase in life expectancy percentage as average values observed.

The calculation of life after surgery, by age, followed the reasoning explained as follows:

Average life expectancy after diagnosis = Age × Average life expectancy at diagnosis

Years of life lost = Average life expectancy – Average life expectancy after diagnosis

Years of life gained = increase life expectancy % × Years of life lost

Average life expectancy after intervention = Average life expectancy at diagnosis + Years of life gained

The calculated values for average life expectancy after intervention, based on the above reasoning, reflect a significant difference between the average lifespan at diagnosis and life expectancy after surgery, both on stages of the disease and types of medical conditions.

In order to calculate quality adjusted life years with intervention, we applied formula 1 using quality of life related utility values ( $Q_i$ ) previously determined by statistical methods and average life expectancy values after intervention (DI) based on data collected and processed in the previous step (table 3).

**Table 3: QALYs with intervention**

Medical condition	Age group	Qi	Di	QALYs
<b>Stage 1</b>				
Diseases of the circulatory apparatus	under 24 years	0,9	46,23	<b>41,61</b>
	25 - 34 years		37,79	<b>34,01</b>
	35 - 44 years		29,31	<b>26,38</b>
	45 - 54 years		20,68	<b>18,61</b>
	55 - 64 years		11,98	<b>10,78</b>
	over 65 years		3,52	<b>3,17</b>
Tumors	under 24 years	0,71	31,41	<b>22,30</b>
	25 - 34 years		25,84	<b>18,35</b>
	35 - 44 years		20,25	<b>14,38</b>
	45 - 54 years		14,69	<b>10,43</b>
	55 - 64 years		8,78	<b>6,24</b>
	over 65 years		3,06	<b>2,17</b>
<b>Stage 2</b>				
Diseases of the circulatory apparatus	under 24 years	0,77	36,41	<b>28,04</b>
	25 - 34 years		29,84	<b>22,98</b>
	35 - 44 years		23,27	<b>17,92</b>
	45 - 54 years		16,30	<b>12,55</b>
	55 - 64 years		9,56	<b>7,36</b>
	over 65 years		2,95	<b>2,27</b>
Tumors	under 24 years	0,55	25,19	<b>13,85</b>
	25 - 34 years		20,55	<b>11,30</b>
	35 - 44 years		15,92	<b>8,75</b>
	45 - 54 years		11,36	<b>6,25</b>
	55 - 64 years		6,83	<b>3,76</b>
	over 65 years		2,31	<b>1,27</b>
<b>Stage 3</b>				
Diseases of the circulatory apparatus	under 24 years	0,57	29,01	<b>16,53</b>
	25 - 34 years		23,71	<b>13,51</b>
	35 - 44 years		18,41	<b>10,49</b>
	45 - 54 years		13,11	<b>7,47</b>
	55 - 64 years		7,81	<b>4,45</b>
	over 65 years		2,51	<b>1,43</b>
Tumors	under 24 years	0,43	17,38	<b>7,47</b>
	25 - 34 years		14,28	<b>6,14</b>
	35 - 44 years		11,18	<b>4,81</b>
	45 - 54 years		8,08	<b>3,47</b>
	55 - 64 years		4,98	<b>2,14</b>
	over 65 years		1,88	<b>0,81</b>

Although the values for QALYs with intervention are reduced from one stage of the disease to another and different according to the medical condition studied they are significantly higher than those for QALY without intervention that we calculated in a previous research (see Pantea and Gligor, 2012b).

Thus, the results validate our research hypothesis and allow us to substantiate that in terms of quality of life, healthcare investments have an important social and health impact.

## **5. Conclusions and discussions**

The reference point of our research is the study of optimal resources' allocation (especially the case of structural funds) for the production of benefits to the society. Since by definition, resources are limited, the healthcare systems faces this condition every day, aspect that led to the development economic evaluations as key component of decision making. In this sense, the need for a common measurement unit that allows comparisons between different sectors of healthcare and even beyond has conditioned new instruments for benefits appraisal including quality adjusted life year, indicator that serves as a tool in channeling public resources to health interventions imperative for the population.

As we previously underlined, our research and results are issues currently addressed only from a theoretical point of view. As demonstrated for two major medical conditions that affect peoples' quality of life and average life expectancy, QALY captures health gains generated by treatments.

The usefulness of our results comes from allowing guidance for the public prioritization process in terms of resource allocation by substantiating the process on forecasts of patients' clinical outcomes. Also, the information provided enables comparisons regarding the effectiveness of different medical interventions for the same health problem by estimating the duration and quality of life gained through treatment.

The limitations of our research arise from the relatively modest sample investigated, which might generate a low capacity to generalize the results. In this sense, our study opened opportunities for further research, such as widening the population investigated, calculating QALYs for other medical conditions that affect human health and calculating QALYs gained for the medical conditions targeted.

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## ROMANIA'S ECONOMY AFTER THE EUROPEAN UNION ACCESSION

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**Abstract:** *If, during the communism, Romania had an unusual position at the European level, after 1989 it had a different path, in comparison with other former communist states: the country had the harshest difficulties finding its European path, then it had the most important economic growth rate; in the same time, it has been the candidate state facing many economic and social issues, which have worsened during the crisis. In this paper, the authors present the evolution of the Romanian economy, by analyzing representative economic indicators, the dynamics of the national economy, after its accession to the European Union (EU). It is obvious that the country's evolution has been influenced by the decisions taken and implemented during the pre-accession period. At first sight, it is very difficult to economically separate the two periods of time. However, one can notice that, after the beginning of negotiations (February 2000), Romania's economic policies have been implemented in a more sustained rhythm, due to the surveillance coming from the European authorities. After seven years of economic growth, which contributed to a partial catching-up with the European average, Romania became member of the EU, having a precarious economic and social situation. Under those circumstances, it would have been normal to continue to implement economic reform policies. Unfortunately, the determination of national authorities has sharply diminished after 2007. The first years of Romania's membership have been characterized by important rates of economic growth, due, among other factors, to favourable international circumstances. This contributed to an increased trust on the part of Romania's population and government in the national economy (even too optimistic). This, together with the fact that Romania had an unhealthy economic growth, contributed, after the outbreak of the crisis, to some powerful shocks for the population and for the economy as a whole (a sudden and rapid economic fall, wage cuts unwitnessed in other European economies, increase of expenditures taxes). The Romanian authorities had to make external loans (from the International Monetary Fund, the EU and the World Bank). In spite of those measures, the Romanian economy did not straighten out. Due to reasons less linked to the economy, those funds did not reach the intended purpose. On the contrary, the Romanian economic and social environment had severely worsened. In the meanwhile, as the EU was facing its own issues, it had adopted firm measures to deal with it. Romania had to accept those measures (for instance, the Fiscal Treaty).*

**Key words:** Romania's economy, European Union, economic growth, economic crisis.

**JEL classification:** F43, N14, O11, O52

## 1. Introduction

The 1989 Revolution brought for Romania, as well as for the other Central and Eastern European countries, an important change in conceiving and acting in the economy, and in the society, generally. One can say that this has been a *changing process without solid theoretical bases, except for some inspirational ideas in different government programs* (Marin, Socol, Niculescu 2005: 4). One can appreciate this has been a *revolution without an ideological program*.

After Romania had been invited to start the accession negotiations (during the European Council hold in December 1999, in Helsinki), the European Union has urged the national authorities to accelerate the social and economic reform measures.

The relations between Romania and the EU have been quite difficult during the pre-accession period. The European officials knew that, where the Romanian strictness was well beyond the European strictness, there was a very large possibility for compromises. One can say that, at first sight, the EU has been very vigilant regarding our country's transformation during the pre-accession period (and even before, starting with the year 1997). Our accession date has been delayed, in comparison with other states, because the developing gaps were too large; in 1999, a medium term strategy has been adopted, allowing the EU and the international financial organization to guide the Romanian economy, still under the state control, and to build a free market (Părean 2013: 539). For the national economy, this period of time can be characterized by a sustained economic growth, allowing the catching-up in comparison with the EU average (a complex analysis has been done by Virginia Câmpeanu and it is presented in Mureșan 2008: 419-448). This catching-up process continued in the years 2007 and 2008, and it has been the best reflected in the evolution of the Gross Domestic Product/inhabitant (Murgescu 2010: 476).

## 2. Economic Growth after EU Accession

The catching-up process is, indeed, obvious, but, in spite of that, in the moment of our accession to the EU, Romania had an economic development level slightly superior to a third of the European average, and approximately 30% of its population lives in a subsistence agriculture (Cerna 2011: 2).

After a period of sustained economic growth, one can identify the following economic risks. In 2007, the accession moment, among the 15 EU poorest economic regions, six were in Romania. The poorest EU region is the North-Est Region, in Romania; in fact, the only Romania region not included in the category "very poor" is București-Ifov, having a GDP/capita of 74% in comparison with the EU average (Rădulescu 2008).

The reform programs implemented after 1989 cannot be characterized by consistency, the adopted measures produced just partially the anticipated effect, which entailed negative effects on the social level, deteriorating the population's living standard. The Romania's difficult situation is reflected by the existence of some major economic and social risks (Părean 2009: 200), like: the part of the external debt in the GDP – medium risk; the excessive growth of loans granted by the banking system – medium risk; the low level of GDP/capita – major risk; the labour productivity – major risk; the increase of the deficit of the current account, especially due to the trade deficit – major risk; other social risks: demographic decrease – major risk; resources allocated for the health insurance programs – major risk; pensions of

retired people, in the state system – major risk; governmental resources allocated for education, health, infrastructure and research and development – major risk.

After its accession, Romania has been a drab member, having neither personality nor initiatives (Boia 2012: 104).

Another important aspect for the Romanian economy, before and after the accession, is related to the relaunching of the internal production, based on the foreign direct investments. Thus, the labour productivity increased significantly, the gap in comparison with the EU average being partially caught-up. If in the year 2000, Romania's average labour productivity represented 28.8% in comparison with EU 25 labour productivity, by 2006 this indicator has reached 38.8%, and by 2008 it has reached 46.6% (\*\*\*- *România în cifre* 2009: 79).

EU has brought Romania important benefits: it has forced the institutions' modernization, it has brought foreign direct investments and economic prosperity. But the local capital is still fragile, the resources' allocation is not compatible with the strategy of sustainable development (Romania exported highly qualified labour force), and the market dominant positions have multiplied. Economic disequilibria have increased, in 2008 the deficit of the current account exceeded 12% of the GDP. Even worse, the savings did not sustained high productivity investments. In 2008, the gross investment exceeded 30% of the GDP (Dăianu 2012: 222), but their structure raises important issues (for instance, there aren't important infrastructure projects – highways, railways, harbors, or important land projects).

The first two years after the accession, the macroeconomic indicators showed a good situation, which contributed to the catching-up process towards Western Europe (table 1). In 2008, although GDP increase was significant, one can notice that the economic crisis started to hit the national economy: unemployment, budgetary deficit and external debt have increased, while the labour productivity has decreased.

**Table 1.** The Dynamics of main macroeconomic indicators, for 2007 - 2008

	GDP (%) yearly variation)	Annual average inflation rate (%)	Unemployment (%)	Budgetary deficit (%) of GDP)	Deficit of payment balance (% of GDP)	External debt (%) of GDP)	Labour productivity (2000 = 100)
2007	6,0	4,8	4,1	-2,6	-13,5	47,5	181,4
2008	7,3	7,8	4,4	-4,8	-12,3	49,1	170,5

Source: \*\*\* - *Anuarul Statistic al României*, 2011

The post-accession strategy, adopted by the government at the beginning of 2007, had, as objectives, to create a framework, favorable for infrastructure development (transports, IT, energy, environment), to develop the human capital, to promote the research and development, to consolidate the market economy mechanisms, etc. (Murgescu 2010: 480); unfortunately, all these objectives were not achieved.

After a sustained economic growth, due to procyclical economic policies, the economic recession could not be avoided. However, one must take into consideration that the catching-up process is a slow one and that a total caught-up rarely takes place. The management of the economic policy doesn't need to be extraordinary, but determined, with serious and capable people, doing their job, taking on obligations and following them through, discretely and responsively

(Părean 2013: 549). The measures they adopt have to avoid social polarization (Derek Aldcroft was severely criticizing the situations where fiscal and redistributive state policies “tend to favor a small minority, to the disadvantage of the big majority of the population [...], while distributing unequally the revenues and the wealth”, and thus the “governance is through and for elitist groups”) (Aldcroft, Sutcliffe 1999: 19). As a matter of fact, since 2007, the International Monetary Fund and the Governor of Romanian National Bank were warning against the risk of the over-heating of the economy (Alonso 2010). The danger was the increased inflation rate and the increased current account deficit (Escritt, Wagstyl 2007). In November 2007, *Standard & Poor* has reduced our country’s perspectives from *stable* to *negative* (Gallagher 2010: 271), and in March 2008 *Economist Intelligence Unit* (EIU) has warned that Romania is among Eastern Europe’s most vulnerable countries. The privatization process was largely concluded, and the foreign investors were no longer very interested in the Romanian economy; consequently, without foreign investments, it was almost impossible to take under control the current account deficit. The foreign investments did not contribute significantly to the increase of the labour market. In 2007, 49 private companies, with a turnover superior to 1 billion euros, were employing only 3.8% of the labour force (Șerbănescu 2008).

### **3. The Beginning of the Crisis and its Manifestations**

There is an intense debate regarding the causes of the crisis in Romania, after 2008. Some authors consider that, partially, the crisis has been imported, especially through the reduction of the external demand, and because of the reticent attitude of foreign investors while others consider as main cause the unsuitable governmental policies in 2007 and 2008. Other authors (Fota, Băcescu 2009:49-54; Voinea 2009: 63) have shown that, in fact, the causes of the crisis in Romania must be looked for exclusively inside the country, the international events having just contributed to the unleashing of the crisis.

The world economic crisis hit Romania in the second half of 2008 (officially, the crisis started on October the 1<sup>st</sup>, 2008). From that moment, the combination between the external deficit, the budgetary deficit and the reduction of financial flows led to important economic disequilibria, at the national level. Partially, the crisis had been imported (the reduction of external demand, the reticent attitude of foreign investors), but a big contribution can be given to internal side-slips.

Unfortunately, in Romania, in the last decade, the government has implemented mainly procyclical policies. During periods of economic growth (in 2005), one has adopted the flat rate tax, encouraging the business sector, while in 2009, during economic recession, the government introduced the minimum tax for the business sector. This led to the closure or suspension of an important number of small and medium sized enterprises (table 2).

**Table 2.** The dynamics of the business sector after the crisis beginning, in Romania

Indicator \ Years	2009	2010	2011
Number of closed enterprises	57041	49092	13290 (sem I)
Number of suspended enterprises	127129	139139	22062 (sem I)

Source: [www.onrc.ro](http://www.onrc.ro), accessed on December the 15<sup>th</sup>, 2012

Certainly, those measures are justified, but we can say that in Romania, only short-term objectives have been followed, while medium- and long-term objectives have been neglected, although these objectives should have been decisive for the economic policy. In 2005, Romania had the historic chance to partially catch-up the gap in relation to the EU average, and the perspective of EU accession has encouraged stimulation actions for the business sector. After the crisis, through the economic measures taken, the government wanted to equilibrate the national budget, and the minimum tax system was intended to clean the Romanian business environment. But this measure reduced even more the economic recovery potential, having negative impact upon the Romanian economy and society.

The difficult economic and social situation in Romania, after 2009, is presented in table 3. The first two years reflect the massive effect of the crisis. We can see that after years of strong economic growth, a strong recession followed. The value of loans has constantly increased, but in the same time, the arrears in repayment have increased as well. As for the public debt, Romania still has one of the most reduced public debts in Europe. However, we can notice that the tendency indicates an increase of the public debt.

The decrease of the unemployment is, on the one hand, encouraging. But, on the other hand, this reduction was possible because many people have left the labour market (through retirement, for instance). And this led to another difficult issue: the considerable increased numbers of pensioners, deterioration of the ratio between active persons and dependent persons, generating a structural deficit of social insurances budget.

**Table 3.** The evolution of some indicators for the economic situation of Romania during the crisis (2008 - 2012)

Indicator \ Years	2009	2010	2011	2012
Economic growth rate – real GDP(%)	-7,1	1,3	2,2	0,3
Inflation rate (%)	5,6	6,1	5,79	4,9
Public debt	147,3	194,5	223,3	241
Governmental public debt (billion RON)	136,5	182,5	210,4	227,2
Public debt as percentage of GDP (%)	29,4	37,2	38,6	40,2%*
Value of loans (billion RON)	198,9	207,9	225,16	?
Value of arrears in repayment (billion RON)	5,9	13,9	21,32	24, 72 (1 <sup>st</sup> semester)
Unemployed people (thousands of persons)	731	714	460	493,8
Unemployment rate (%)	7,8	6,97	5,12	5,59

\* estimated

Source: www.bnr.ro, www.insse.ro, www.mfinante.ro, www.onrc.ro, accessed on February the 15<sup>th</sup>, 2012

The inflation rate has increased in the first two years (2009 and 2010), but then a disinflationary trend has followed. However, the target, in terms of inflation rate, has not been reached: until the end of 2012, the annual inflation rate had been of 4.95%, higher with 0.95% than the target for 2012 (Raport asupra inflației 2013:8).

After having officially acknowledged the crisis, the national authorities adopted a program to fight against its undesirable effects. *Action Plan for Economic Growth and Jobs* has been adopted by the end of 2008 (November) and had many stipulations. Three measures referred to a fiscal relaxation, one measure to job creation, seven measures were aimed to stimulate the aggregate demand (by increasing the government expenditures with goods and services) and the aggregate supply (by stimulating the private investments), others were administrative measures, for a better coordination of activities within the economy, regarding a better absorption rate of structural funds, or regarding the insurance in the economy of necessary capital flows by the private banks.

On March the 29th 2009, Romania signed a borrowing and assistance agreement with international financial organizations. The borrowed amount of money was of 19.5 billion Euros, following the agreement with IMF, European Commission, European Bank for Reconstruction and Development, and World Bank. Romania used 11.8 billion euros in 2009, 7.1 billion euros in 2010 and 1.05 billion euros in 2011.

The conditions imposed to Romania referred to deficit control actions. The restrictive financial policy led to a spectacular cut of current account deficit (from 16157 million Euros in 2008 to 5054 million euros in 2009, especially due to a reduction of imports, by more than 12.3 billion euros) (Murgescu 2010: 478).

In 2009, the most important relaunch measure was the Program “The First House”, having a very important budget for the first stage (approximately 1 billion euros for 2009). Although this program had several stages, it did not stimulate the construction sectors, people preferring to buy apartments already built, instead of new apartments.

In 2009, the difficulties of the Romanian authorities were obvious. During the last two months of the year, the employees in the budgetary system had an unpaid vacation of 5 days, or had to work without being paid (a form of partial unemployment). But the toughest measures had been taken in 2010, when the wages of the employees in the budgetary system had been cut by 25%, and the value-added tax increased by 5% (from 19% to 24%)

At the beginning of 2012, Romania signed the Fiscal Discipline Treaty, taking on the obligation of increasing the budgetary discipline. This Treaty aims to solve the issues of the Euro zone. In the same time, we must take into consideration the fact that our country’s situation depends on a positive solution for the Euro zone. This is not a fiscal integration, so we can say that the monetary union is not a complete one without a common treasury. According to the Fiscal Treaty, the structural deficit must be of maximum 0.5% of GDP. In Romania, this deficit was superior to 3% of GDP, and in 2008 it has been of 8%. In order to reach the target, a fiscal and structural correction of 3% of GDP is needed, which is considerable, especially taking into consideration that our fiscal revenues represent 28-29% of GDP (Dăianu 2012: 211). Of course, the immediate effects are negative, but positive effects are expected on medium- and long-term. One can also consider that implementing such an agreement represents a high limitation of the capacity of the fiscal policy to stimulate the activity of economic agents. A structural deficit of 0.5% of GDP means that the actual deficit should be close to zero, on the long-run. Given the fact that, in Romania, the interest rates of the public debt represent 1.7%-1.8% of the GDP, this means that the budget, before the payment of the interest rates for the public debt, must register a surplus.

#### **4. Conclusion**

After 1989, Romania has been long looking for its own path, more than other former communist countries. After the accession negotiations began, Romania had many benefits. Between 2000 and 2008, it had the biggest economic growth rate in Europe: this period of time has been the only one, in over 200 years, when Romania partially caught-up its development gaps, in comparison with the European average. This is an important thing to be mentioned, given the major differences between our national economy and the economies of other West European countries. Even more, the West European structures had a major and positive impact upon the Romanian economy and society.

In Romania, the way of thinking and acting has been seriously influenced by the communist inheritance. Unfortunately, Romania had a certain reserve in immediately and accordingly implementing the necessary economic measures, which would have contributed to a healthy and performing economy. This seems to be a paradox, especially taking into consideration the optimism and confidence of the population in the Western structures. It is obvious that there is a huge difference between people’s desires and politicians’ desires. As a matter of fact, just as Lucian Boia notices, the Romanian politician is also a business person. Thus, in implementing the economic measures and European directives there was not much of an enthusiasm, and in the

moment of EU accession, Romania seemed to be a country with a less successful economic reform, partially due to the fact that the European authorities did not pay too much attention to the way of implementing the reforms (in that sense, Tom Gallagher noticed that the Romanian authorities managed to “balkanize” the Westerns).

If, during the accession negotiations, there was a sustained rhythm of implementing the economic reforms, after the accession this rhythm became much more relaxed. After 2007, our country’s economy continued to have high economic growth rates, but mainly due to the fact that Romania was now part of a select economic group, allowing us to have a low country risk and to attract foreign investors. Also, the lack of authentic reforms lowered the price of certain economic resources, thus keeping the country attractive. After accession, the economic reforms have almost stopped. Consequently, after 2008, in a crisis context, most economic indicators for Romania have worsened, and the financial situation has considerably deteriorated. The increase of budgetary deficit was the expression of a reduced economic activity, but also of unwise economic policies from previous period of time. The result was the unpopular measures taken in 2010, in order to rebalance the national budget. Unfortunately, those decisions had an adverse effect, by strongly disequilibrating the households’ budgets. Those measures were intended for a short period of time (6 months), in order to take the necessary measures to stimulate the economic activities. But the measures failed. And the evolution of the external environment did not help Romania.

The social negative evolution is the direct effect of a reduced GDP, of a reduced power purchase of households, and an indirect effect of revenues redistribution methods aimed to favor limited interest groups, to the disadvantage of a vast majority of the population.

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## IS THERE ANY RELIABLE COMPASS FOR TRACKING EU MEMBER STATES COMPETITIVENESS?

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**Abstract:** *Competitiveness has a variety of definitions that lead to different indicators, each with its own particular application. Moreover, for any single concept of competitiveness, several measures may be constructed, depending on further specific assumptions. No single measure, or limited set of measures can provide all the information required to assess and manage an economy. In this paper we decided to construct two composite indices to assess two dimensions of competitiveness: one called simply economic robustness and the second one called price competitiveness. Almost all the time the decisions we make depend on what we measure, how we do our measurements and how we interpret them. To construct the composite indices we applied an exploratory factor analysis which is based on the idea that strongly correlated indicators refer to the same underlying (latent) dimension. Thus, a data set consisting of many indicators can be reduced into a single or a small number of composite variables (the so-called factor scores), each reflecting a significant part of the total variance. The indicators included in our analysis are: GDP per capita, domestic demand, private consumption, governmental consumption, gross fixed capital formation, harmonized index of consumer prices (HICP), Labor Cost Index (LCI), Industrial Production Index (IPI), export of goods and services, import of goods and services, real effective exchange rate (UCL based) and population and the data were collected for all EU Member States in the year 2010, as they are considered to track wealth and economic growth, indicate economic robustness and correlate with countries competitiveness. After constructing the composite indices, we tested their robustness throughout a pooled OLS (Ordinary Least Squares) regression on the GDP per capita, as the dependent variable. The outcomes proved to be significant and having the expected signs. The conclusions highlight that among countries that were characterized by high economic robustness in 2010 are Germany, Spain, France, Italy, Netherlands and United Kingdom, while among the countries that performed poorly we can mention Malta, Estonia, Bulgaria and Romania.*

**Keywords:** factor analysis; price competitiveness index; economic robustness index; EU 27

**JEL Classifications:** F41, F15,

### 1. Introduction

The term “international competitiveness” has been associated over time with different definitions and senses, being at the moment one of the most controversial topics. Although some economists argue that competitiveness is generated at the microeconomic level, the level at which it is sustained and reinforced is the macroeconomic level, although, at the macro-economic level, the concept of competitiveness is much more poorly defined and more strongly contested. The lack of a commonly accepted definition is by far one of the most important source of opposition to the concept of macro-economic competitiveness or international competitiveness.

In an increasingly globalizing world, most countries are integrated into the world economy, voluntarily or by force. International competitiveness has to be in this context both reflected by internal and external performances. We cannot say that a country is competitive if its living standards are low although its cheap products are sold worldwide; and also it is not common for a country to enjoy a high living standard if it doesn't have any internationally competitive products, firms or industries. There are a variety of definitions of competitiveness that lead to different indicators, each with its own particular application. Moreover, for any single concept of competitiveness, several measures may be constructed, depending on further specific assumptions. No single measure, or limited set of measures, can provide all the information required to assess and manage an economy. These measures range from indicators of economic performance, single-factor indicators based on price or cost development, to composite indices reflecting economic, structural and institutional factors.

The problem of national competitiveness is extremely important in the context of countries accession to the Economic and Monetary Union, as future member states must integrate into a competitive economic area. Thus, in this paper we decided to construct two composite indices to assess two dimensions of competitiveness: one called simply economic robustness and the second one called price competitiveness. To construct these indices we applied an exploratory factor analysis which is based on the idea that strongly correlated indicators refer to the same underlying (latent) dimension, so that a data set consisting of many indicators can be reduced into a single or a small number of composite variables (the so-called factor scores), each reflecting a significant part of the total variance. We considered 12 significant variables: GDP *per capita*, domestic demand, private consumption, governmental consumption, gross fixed capital formation, harmonized index of consumer prices (HICP), Labor Cost Index (LCI), Industrial Production Index (IPI), export of goods and services, import of goods and services, real effective exchange rate (UCL based) and population and we collected our data for all EU Member States in the year 2010. After constructing the composites, we tested their robustness by regressing them on the GDP *per capita*, as the dependent variable. The outcomes proved to be significant with the expected signs.

The plan of the paper is as follows: the following section reviews the empirical literature in the field of international competitiveness; section 3 presents the construction of the two composite indicators developed in this study based on the considered variables; section 4 presents the methodology chosen for our data and section 5 reports the data and main findings. The outcomes are highlighted in the last section of the paper.

## **2. Related literature**

Many economists seem to think that like trade performance, living standard alone does not give a complete answer to the competitiveness question hence they combine issues of external balance and domestic performance (Aiginger, 1998), which Fagerberg *et al.* (2007) calls the "double meaning" of national competitiveness, i.e. trade performance and economic well-being of citizens. In this sense, many studies developed different methodologies in order to measure the many dimensions of competitiveness or to capture the overall effect of the international competitiveness. Even though some institutions have taken a broad view with an emphasis on the overall competitiveness and others have focused on

the competitiveness of the external sector, the most commonly used research methods in this field are still quantitative, many researchers choosing the indexing and classification method. The same methodology is applied by the two well-known institutions *WEF (World Economic Forum)* and *IMD (International Institute for Management Development)* which are first building an index of national competitiveness (by compiling individual sub-indicators into a single composite indicator), then calculate each country's score based on the indicator and classify the countries based on the scores obtained. There are also several institutions that monitor countries competitiveness using both macro and micro-based competitiveness indicators. The EC publishes annually the "*European Competitiveness Report*" (2012) which analyzes recent developments of overall competitiveness performance of the European Union (EU) and the impact of economic reforms on productivity. The Organization for Economic Cooperation and Development (OECD) also studies the impact of policies on labor productivity in member countries in its annual publication entitled "*Going for Growth*" (2011). The IMF regularly reviews competitiveness developments as part of its Article IV surveillance exercise of member countries, while the World Bank has developed also international rankings of countries using competitiveness indicators which have a microeconomic focus.

In the paper called "*How much did competitiveness of the Greek economy decline since EMU entry?*" (Malliaropulos, 2010) the author construct sectorial indices of price and wage competitiveness and combine them into two aggregate indices of Real Effective Exchange Rates (REERs) in order to assess Greek's competitiveness in terms of relative prices and unit labor costs. Although manufacturing and international trade in goods have traditionally represented a basis for the calculation of exchange rate indices or national price competitiveness indicators, this approach is however too narrow to measure macroeconomic competitiveness of a country – especially in developed economies where the service sector has a growing trend (Magerl and Mooslechner, 2006). Until recently, there was a lack of reliable indicators that could be used to put numbers on the so-called many dimensions of competitiveness, emphasized by the theoretical literature. But in recent years, the availability and quality of different aspects of development improved significantly, giving researchers new opportunities to investigate the differences in economic performance among countries, by integrating large amounts of information into easily understandable formats, like for example, composite indicators (Freudenberg, 2003). As Joseph Schumpeter (Schumpeter, 1943) already stated, price or cost competitiveness are left behind by other measures of competitiveness, like new commodity, new technology, new sources of supply and new type of organization. Fagerberg (2007) also constructed two composite indices to assess technological competitiveness and the capacity of countries to exploit such competitiveness. He based his composites on several reliable indicators and applied a confirmatory factor analysis in order to give weights to the variables in the composite. Further, he tested their robustness using cross-sectional data for a large number of countries, and the reported results were arguably consistent with other lessons from the literature. In the paper "*Measuring External Competitiveness: An Overview*" (Leichter et al., 2010) the authors are assessing Italy's external competitiveness, using a large number of indicators and comparing Italy's competitive position among the major OECD countries in 2006 (pre-crisis) and 2008 throughout a Principal Components Analysis (PCA), a methodology to synthesize much of the information contained in a number

of observed variables in terms of a smaller number of unobserved variables. Although preliminary, their results showed that the variation in Italy's competitiveness was left relatively unchanged by the crisis.

### **3. Methodology**

Almost all the time the decisions we make depend on what we measure, how we do our measurements and how we interpret them. The indicators considered in this section are: GDP *per capita*, domestic demand, private consumption, governmental consumption, gross fixed capital formation, harmonized index of consumer prices (HICP), Labor Cost Index (LCI), Industrial Production Index (IPI), export of goods and services, import of goods and services, real effective exchange rate (UCL based) and population and were collected for all EU Member States in the year 2010. These indicators serve several purposes but first of all they are considered to track wealth and economic growth, indicate economic robustness and correlate with countries competitiveness.

GDP, as a key concept of macroeconomics, reflects the market value of all goods and services intended for final consumption, produced in all branches of the economy in a country in one year. It can serve as a measure of well-being of a country and also provide a good first approximation for international and temporal comparisons. It is well known the fact that, domestic demand, as a component of GDP can influence economic growth by stimulating economic activities and can generate jobs and increase production capacity. Because GDP combines the sum of all activities that can be assessed in money and not their usefulness (or even their destruction) means that GDP is not a complex tool for measuring well-being and quality of life, which is why we have introduced in the analysis the two components of consumption. Another adequate indicator used in the present analysis is gross fixed capital formation, giving a measure on the expenditure on capital goods (durable goods) purchased by the productive units to be used for at least one year in the production process, as well as the value of homes purchased (or built) by population. Harmonized Index of Consumer Prices (HICP), as a weighted average of price indices of member states who have adopted the euro serves at maintaining price stability in the Euro Area and is also used to assess the convergence criteria on inflation that countries must fulfill in order to adopt the Euro. The Labor Cost Index (LCI) measures the cost pressure arising from the production factor "labor", while the Producer Price Index (PPI) measures the average change over time in the selling prices received by domestic producers for their output. Total exports gives information about the foreign demand for goods/services produced by the country in question, while total imports reflect how strong the domestic demand is. Increase or decrease of a currency in relation to another currency reflects the confidence of international economic entities in that country's economy (among other factors) as well as the degree of competitiveness of its exported products (a low exchange rate indicates a low price of the products and thus a competitive advantage). Real Effective Exchange Rate (REER) aims to assess a country's price or cost competitiveness relative to its principal competitors in international markets. Its importance stems from the fact that it can be used as an indicator for international trade competitiveness of countries. Because of its important role played in an economy, the real exchange rate has been one of the most controversial issues both in theory and practice.

The model developed in this paper takes into consideration the EU-27 countries in different stages of development, from highly developed countries (Germany, United Kingdom, Denmark, and Luxembourg), developed countries (Belgium, Czech Republic, Austria) and developing countries (Bulgaria, Romania, Poland). Not having a pre-defined idea about the structure or exact dimensions that are in our set of variables, we first employ an Exploratory Factor Analysis in order to get a small set of correlated variables. Based on the Exploratory Factor Analysis outcomes, we constructed two composite indices which we called “economic robustness” and “price competitiveness”, giving each variable an equal weight. To weight together a large number of individual variables into one composite indicator, we had to standardize the variables on a common scale. We did this by deducting the mean of the indicator and dividing it by its standard deviation. The “economic robustness” and “price competitiveness” equations based on the factor analysis are the following:

$$I_{ER} = (14,28 * EC_1 + 14,28 * DD + 14,28 * GC + 14,28 * PC + 14,28 * GFCF + 14,28 * EXP + 14,28 * IMP + 14,8 * POP)/100$$

$$I_{PC} = (50 * REUCL + 50 * HICP)/100$$

In order to test the robustness of the two composite indices, we estimated our model using a cross-sectional panel data regression with GDP *per capita* as the dependent variable.

The general form of the model is:

**The general form the Model:**

$$y_{i2010} = c + x_{i2010}\alpha + \varepsilon_{i2010}, \quad i = 1, \dots, N$$

$\varepsilon_{i2010}$  = residual disturbance term

**The model becomes:**

$$y_{i2010} = c + ec.rob_{i2010}\alpha + price_{i2010}\beta + \varepsilon_{i2010},$$

$i = 1, \dots, N; t = 2010$

$ec.rob_{i2010}$  = economic robustness of country  $i$

$price_{i2010}\beta$  = price competitiveness of country  $i$

$\alpha, \beta$  = parameters

$\varepsilon_{i2010}$  = residual disturbance term

#### 4. Empirical findings

It is obvious that the 11 variables are redundant and they cannot measure in the same time as many aspects of the economy. This is why we applied an exploratory factor analysis, to group the variables on a smaller number of dimensions. One of the most commonly used criteria for solving the number-of-factors problem is the eigenvalue-one criterion, also known as the Kaiser criterion (*Kaiser, 1960*). With this approach, you retain and interpret any factor with an eigenvalue greater than 1.00. Each observed variable contributes one unit of variance to the total variance in the data set and therefore any factor that displays an eigenvalue greater than 1.00 is accounting for a greater amount of variance and worth being retained. The proportion indicates the relative weight of each factor in the total variance. We can clearly see from the table below (*Table 4.1.*) that factor1, with an eigenvalue of 7.04284 explains 0, 78% of the total variance, while factor2, with an eigenvalue of 1.10248 explains 0, 12% of the total variance.

**Table 4.1. Total variance explained**

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	7.04284	5.94037	0.7880	0.7880
Factor2	1.10248	0.55257	0.1233	0.9113
Factor3	0.54990	0.30480	0.0615	0.9728
Factor4	0.24511	0.10746	0.0274	1.0003
Factor5	0.13764	0.12315	0.0154	1.0157
Factor6	0.01450	0.00404	0.0016	1.0173
Factor7	0.01046	0.01051	0.0012	1.0185
Factor8	-0.00005	0.00076	-0.0000	1.0184
Factor9	-0.00081	0.01301	-0.0001	1.0184
Factor10	-0.01382	0.13643	-0.0015	1.0168
Factor11	-0.15025	.	-0.0168	1.0000

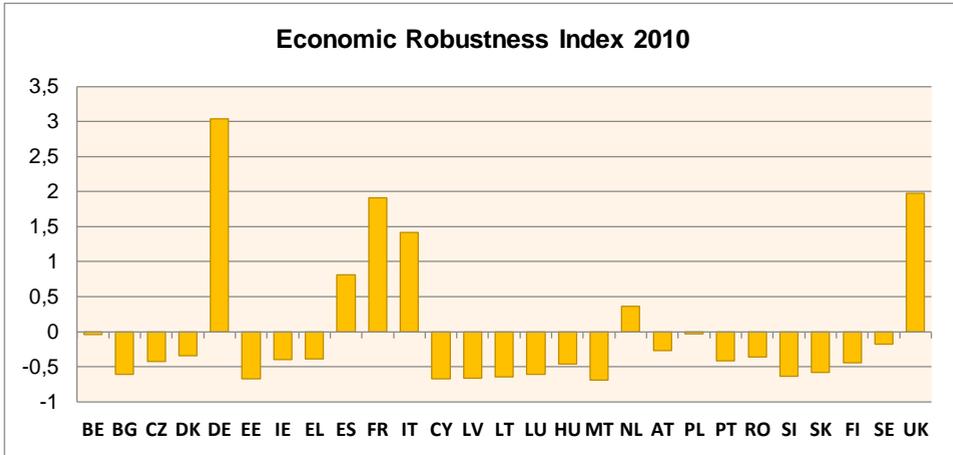
Having more than one variable loading on each factor, we grouped these variables according to the Rotated Component Matrix in *Table 4.2*. In the rotated component matrix, the variable's order is mixed, each of them explaining at least half of each original variable's variance. In this case, the communality value for each variable should be 0.50 or higher. Communalities represent the proportion of the variance in the original variables that is accounted for by the factor solution. A given variable will display a large communality if it loads heavily on at least one of the study's retained components. Thus, we have 7 variables loading on factor 1 and 4 variables loading on factor 2.

**Table 4.2. Rotated component matrix**

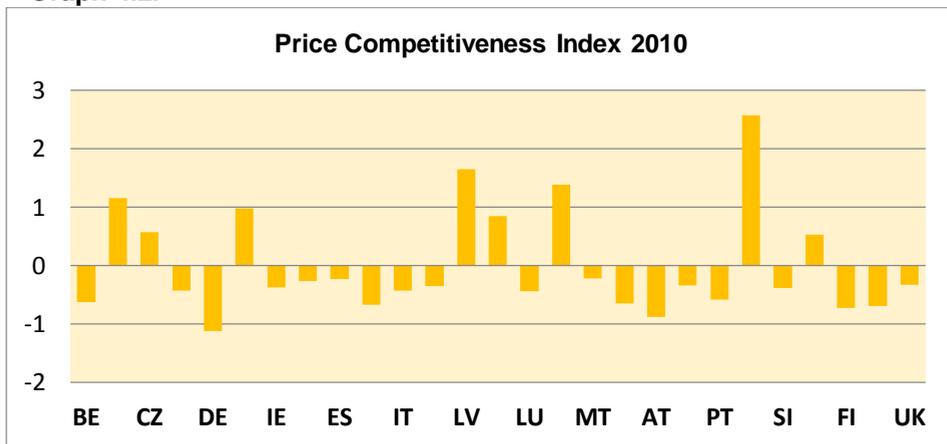
Variable	Factor1	Factor2
<i>DD</i>	0.9815	-0.1183
<i>REUCL</i>	-0.2598	0.6595
<i>GC</i>	0.9708	-0.1409
<i>PC</i>	0.9808	-0.1043
<i>GFCF</i>	0.9792	-0.1334
<i>HICP</i>	-0.2535	0.7201
<i>LCI</i>	-0.0128	0.1169
<i>IPI</i>	-0.1678	0.1471
<i>EXP</i>	0.9076	-0.2452
<i>IMP</i>	0.9440	-0.2198
<i>POP</i>	0.9698	0.0230

On first iteration, the communalities for the variables *LCI* and *IPI* for 2010 were less than 0.50, so we replicated the analysis removing the variables *LCI* and *IPI*. We decided to keep the *HICP* and *REUCL*, because in the Rotated Component Matrix table, their values increased substantially. Based on the two factors, we constructed two composite indices, the Economic Robustness Index and Price Competitiveness Index, giving each variable within the indicator an equal weight (*D. Archibugi & A. Coco, 2004*). The descriptive statistics based on the two indices are shown in Graph 4.2.

**Graph 4.1.**



**Graph 4.2.**



Although greater weights should be given to variables that are considered to have higher shares in the composite or that lower weights should be given to the highly correlated variables, our outcomes are still important for measuring the overall performance of countries. The robustness of the two indices will be tested throughout a pooled OLS (Ordinary Least Squares) regression on the GDP *per capita*, as the dependent variable. The outcomes of the estimated model are shown below:

**Table 4.3. Regression results**

<b>VARIABLES</b>	<b>OLS</b>
Economic Robustness	<b>1.008***</b> <b>(0.0261)</b>
Price Competitiveness	<b>-0.0530***</b> <b>(0.0148)</b>
Constant	<b>-0</b> <b>(0.0158)</b>
<b>Observations</b>	<b>27</b>
<b>R-squared</b>	<b>0.994</b>

Note: The dependent variable is GDP *per capita* (millions of euro, reference year 2005-at 2005 exchange rates)  $\beta$  values of the parameters are reported. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels.

We controlled for heteroskedasticity using the Windmeijer corrected standard errors (option robust in Stata). The F test is significant at 10% level, meaning that our model is correctly specified and all the coefficients are different from 0. The coefficients of the two composite indices included in the model have the expected signs, significantly different from zero at 0,5% level of significance. With an  $R^2$  of 99,4% , the model explains 99,4% of the GDP variance. Although our model suffers from omitted variables, it does not invalidate our findings, the indicators in question being robust to this estimation. In our case, we can interpret the result as follows: when economic robustness changes by one unit, the GDP *per capita* will increase in average by 100% and when price competitiveness changes by one unit, then the GDP *per capita* will decrease by 5,3%.

## 5. Conclusions

The general issue of price competitiveness concerns the choice of price or cost measure used. Price and or/cost competitiveness reflects the traditional view on competitiveness, which emphasizes the potentially damaging effects of excessive price/cost growth on the economy. In our case the price competitiveness index includes two important components: the HICP which measures the price stability on one hand and REUCL based on unit labor costs which is commonly used for assessing countries' price competitiveness, mostly for industrial countries, on the other hand. In our study, economic robustness reflects the good or bad performance in terms of selected indicators and will vary in time and across countries and is likely to depend on the flexibility of factor markets and anti-crisis policy interventions. Although the outcomes of our analysis are still preliminary, they point out that among countries that were characterized by high economic robustness in 2010 are Germany, Spain, France, Italy, Netherlands and United Kingdom. Although the leader in assessing this dimension was Germany, with the highest value, United Kingdom, France and Italy were also amongst the countries with the best results. There are several countries that performed poorly and among them we mention Malta, Estonia, Bulgaria, Romania, although the lowest value of all countries belongs to Malta. In 2010, the overall trend among all countries in the sample was a low

economic robustness, and this might be explained in part by the sovereign debt crisis in Greece and other vulnerable countries. As for price competitiveness, the countries that performed well in terms of economic robustness are taking advantage of the price competitiveness as well. Although there are many countries with positive effects of the price competitiveness, their quantitative effects are rather low. There are also countries that lost their price competitiveness, lagging behind the countries in the sample and these are Romania, with the highest value, Bulgaria, Estonia, Latvia, Hungary, Poland, and Lithuania.

A basic conclusion underpinning these prescriptions is that exporters from Euro Area crisis countries underperformed. The strong deterioration in Germany can be explained by labor market policies intended to cushion the impact of the crisis on employment, while for France, Spain and Italy export growth were lagging behind, losing simultaneously market shares. The conclusions highlight that in 2010 most countries experienced either some deterioration in their position or remained relatively unaffected and the eight newest European Union members (Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, and Romania) already suffer from problems that dragged the GIIPS—Greece, Ireland, Italy, Portugal, and Spain—into crisis: loss of competitiveness, widening external deficits, and deteriorating public finances.

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**Table 1. Overview of the dataset**

<b>INDICATOR</b>	<b>Domestic demand</b>
UNIT	Millions of euro, chain-linked volumes, reference year 2005 (at 2005 exchange rates)
Source:	<a href="http://www.ameco.eu">www.ameco.eu</a>
<b>INDICATOR</b>	<b>Gross domestic product at market prices</b>
UNIT	Millions of euro, chain-linked volumes, reference year 2005 (at 2005 exchange rates)
Source:	<a href="http://www.eurostat.eu">www.eurostat.eu</a>
<b>INDICATOR</b>	<b>Real Effective Exchange Rate (deflator: unit labor costs in the total economy - 36 trading partners)</b>
UNIT	Index, 1999=100
Source:	<a href="http://www.eurostat.eu">www.eurostat.eu</a>
<b>INDICATOR</b>	<b>Final consumption expenditure of general government</b>
UNIT	Millions of euro, chain-linked volumes, reference year 2005 (at 2005 exchange rates)
Source:	<a href="http://www.eurostat.eu">www.eurostat.eu</a>
<b>INDICATOR</b>	<b>Final consumption expenditure of households</b>
UNIT	Millions of euro, chain-linked volumes, reference year 2005 (at 2005 exchange rates)
Source:	<a href="http://www.eurostat.eu">www.eurostat.eu</a>
<b>INDICATOR</b>	<b>Gross fixed capital formation</b>
UNIT	Millions of euro, chain-linked volumes, reference year 2005 (at 2005 exchange rates)
Source:	<a href="http://www.eurostat.eu">www.eurostat.eu</a>
<b>INDICATOR</b>	<b>All-items HICP</b>
UNIT	Annual average index

Source: [www.eurostat.eu](http://www.eurostat.eu)  
**INDICATOR** **Labor Cost Index - Total labor costs**  
UNIT Index, 2008=100  
Source: [www.eurostat.eu](http://www.eurostat.eu)  
**INDICATOR** **Volume index of production**  
UNIT Data adjusted by working days  
Source: [www.eurostat.eu](http://www.eurostat.eu)  
**INDICATOR** **Exports of goods and services**  
UNIT Millions of euro, chain-linked volumes, reference year 2005 (at 2005 exchange rates)  
Source: [www.eurostat.eu](http://www.eurostat.eu)  
**INDICATOR** **Imports of goods and services**  
UNIT Millions of euro, chain-linked volumes, reference year 2005 (at 2005 exchange rates)  
Source: [www.eurostat.eu](http://www.eurostat.eu)  
**INDICATOR** **Total Population**  
UNIT Number of persons  
Source: [www.eurostat.eu](http://www.eurostat.eu)

# A SNAPSHOT OF THE TECHNOLOGICAL COMPETITIVENESS OF COUNTRIES

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**Abstract:** *It is well known that technology is a key factor for the economic progress and helps countries competing more successfully in markets for new goods and services. Technological competitiveness becomes this way closely related to the degree of innovativeness of a country. Although there are several indicators that measure directly the innovativeness of a country, there are still problems at the moment related to the availability of data. In this paper, we decided to assess the technological competitiveness of countries, based on a structural decomposition analysis of the patent shares on the world market. Unlike other authors who applied this methodology in their studies, we collected our data from the World Intellectual Property Organization (WIPO) Statistical Database, covering 12 years, from 2000 till 2011 and we took into consideration 35 technology subsectors in 33 countries (EU 27, China, Canada, Japan, US, Switzerland and Norway). This approach should highlight the countries' technological opportunities on the world level and measure their access towards sectors with high technological opportunities. Structural decomposition analysis points out the extent to which the shifts between technological sectors were induced by the changing technological environment on the world level. The analysis also shows the extent to which a country has an advantage/disadvantage from its past specialization pattern, having had a priori patenting activities in sectors that are now offering high opportunities and the extent to which the country deliberately moved into high opportunity technology sectors, or at least out of the industries with declining opportunities. The outcomes showed that technological development of countries on the world market played an important role for the patenting activity, being highly related to a well-developed infrastructure and pointed out that there are still a lot of European countries facing problems related to the technological infrastructure and technological capabilities. Countries that managed to keep their market shares high and also to increase their market shares over the years, while taking advantage of high opportunity sectors at the world level are the real leaders in terms of technological development. These countries are Japan, US, and China from the European states: Germany, France, Netherland, and Switzerland.*

**Keywords:** technological competitiveness; structural decomposition analysis; patent shares;

**JEL Classifications:** O31, O33

## 1. Introduction

It is well known that technology is a key factor for the economic progress. From new inventions like software, robotics and biotechnology, to improvements in manufacturing systems and processes, technology makes economies and societies more efficient and productive. Technology also helps countries compete more successfully in markets for new goods and services. Technological competitiveness becomes in this way closely related to the degree of innovativeness of a country. As

Michael Porter already stated, “companies can be highly productive in any industry- shoes, agriculture, or semiconductors- if they employ sophisticated methods, use advanced technology, and offer unique products and services” (Porter, 1998). Moreover, what he was trying to emphasize is that there is no low intensive industry or sector and that all sectors can be knowledge intensive and therefore can employ advanced technology. Although there are several indicators that measure directly the innovativeness of a country, there are still problems at the moment related to the availability of data. In this paper, we decided to assess the technological competitiveness of countries, based on a structural decomposition analysis of the patent shares on the world market. This analysis was first developed by Fagerberg and Solie and later improved by Laursen (1999). It has been also applied in some empirical studies in the literature assessing trade performance and structural competitiveness in different countries or within Euro Area (Ilzkovitz et. al., 2010). Unlike other authors who also applied this methodology in their studies, we collected our data from the World Intellectual Property Organization (WIPO) Statistical Database, covering the years 2000-2011 and we took into consideration 35 technology subsectors in 33 countries (EU 27, China, Canada, Japan, US, Switzerland and Norway).

We followed the assumption that the technological gap between the developed the countries and developing ones represent an important path of development for the latter and that technology can also reveal trade patterns. This might be explained by the fact that technology accumulation lead to the development of technological capabilities that often makes export structures difficult to handle. (Lall, 1992, 2000). The outcomes of the analysis proved to be significant, highlighting the fact that technological development of the world market has an important role for the patenting activity of countries and that are also a lot of countries facing problems related to the technological infrastructure and technological capabilities. These descriptive statistics can serve as guide lines and directives for governments in drawing their goals towards improving the technological capabilities.

The plan of the paper is as follows: the following section reviews the empirical literature in the field of technological competitiveness and patents as a proxy for technological development, paying particular attention to patent shares decomposition; section 3 presents the applied methodology and section 4 reports the data and main findings. The outcomes are highlighted in the least section of the paper.

## **2. Related literature**

Patents have been used as a proxy for technological development in many empirical studies in the literature. The number of patents was used by Furman et al. (2002) and Furman and Hayes (2004) as a measure of the “innovative capacity” of a country. Although patents refer more to inventions rather than to innovations, and although they are used much more intensively in some industries than others, we can still consider them as an important base for advanced technology and intensive knowledge. Fagerberg (1987) also considered the patent statistics in constructing an index for technological development, in order to test the basic hypothesis of the technology gap theory and to analyze the differing growth performances of some industrial countries. He emphasized a positive correlation between the level of economic development of a country, measured as GDP per capita and the level of its technological development measured as number of patents. Although this proxy

can serve as a useful tool in understanding innovation, it is an imperfect measure because the propensity to patent varies considerably across industries, with many innovations not patented (or even not patentable). So, basing the entire analysis of the technological capability exclusively on this source might lead to a biased representation of the evidence. Although the concept of technological capability covers different aspects like: production capability, investment capability and innovation capability (Dalhman et. al. 1987), we decided to base our research only on patent growth rates in main technological sectors using the structural decomposition analysis. This methodology is based on the constant market share analysis, often used in empirical studies of trade (Fagerberg *et al.*, 1987; Laursen, 1999), but Laursen (1999) has also adopted this methodology for the analysis of the structural decomposition of patent shares over time at national level. This approach should highlight the countries' technological opportunities and measure a country's access to sectors with high technological opportunities at the world level. Structural decomposition analysis points out the extent to which the shifts between technological sectors of countries were induced by the changing technological environment at the world level. The analysis also shows the extent to which the country has an advantage/disadvantage from its past specialization pattern, having had a priori patenting activities in the sectors that are now offering high opportunities and the extent to which the country deliberately moved into high opportunity sectors, or at least out of the areas with declining opportunities. Furthermore, the analysis enables us to consider as exogenous the technological environment effects in the technology share effects and structural technology effects and as endogenous the country-level effects in the growth adaptation and stagnation effects. In the article "*Trade Performance and Structural Competitiveness Developments in the Euro Area: are Member States Equipped to meet the Globalization Challenges of the 21st Century?*" (Ilzkovitz et. al., 2010). the authors apply the structural decomposition analysis to the share of patents of Euro Area Member States on the world market, paying particular attention to the Euro Area as a whole. They concluded that there is a positive relationship between technology and market opportunities and those countries that are concentrating their innovative capacities in high-tech sectors are also shifting their production structures towards the sectors that are benefiting from the strongest growth in world demand. Among the methods in the literature that explore technology diffusion, we can mention patent citations and also patent maps. While the first refers to the fact that the more a certain patent is cited by subsequent patents, the more technology is considered to be diffused, implying that technology is more widely applied and thus more valuable (S.B. Chang et. al., 2009), the second one is part of the visualization methods and is considered to be proper for representing patent information and its analysis results (Y. G. Kim et. al., 2008). Visualization methods for patent analysis are called broadly a patent map. A patent map is the visualized expression of total patent analysis results to understand complex patent information easily and effectively. This is produced by gathering related patent documents of a target technology field, processing, and analyzing them (WIPO, 2003). Patents are useful sources of knowledge about technological progress and innovative activity (Park et al., 2005) and up until recently, patents, as a means to protect inventions legally, were perceived to be only for technology intensive sectors (Bader, 2008), but as Michael Porter already emphasized, "all industries can employ advanced technology; all industries can be knowledge intensive" (Porter, 1998). A conclusion from this would be that the value of firms,

especially in the knowledge-intensive business service sector is determined by the value of their intellectual property that can be represented and protected by patents (Hanel, 2006) and therefore more firms are trying to protect their service innovations (Bader, 2008). Nowadays patenting business models and software solutions seems to be quite common, especially in the US and Japan, countries that are practicing this for quite a while.

### 3. Methodology

Having discussed the role played by technology for the technological development of a country, in this section we apply the structural decomposition analysis of patent shares for a number of 33 countries. We chose to consider the EU 27 and also other 6 major economic powers of the world. The data were collected from the World Intellectual Property Organization (WIPO) Statistical Database representing the number of patent grants of a country by technology. The data covers 35 technology subsectors and were collected for the years 2000-2011. Although by adjusting the number of patents by country size we would have obtained a more reliable indicator (large countries tend to patent more than small countries), we can still make a relevant interpretation of the analysis using as a proxy the total number of patent grants. In many empirical studies, the number of patents is considered a proxy for the degree of technological development of a country. Therefore, in this section we apply the decomposition analysis in order to assess the level of technology of a country. Even though nor a single measure, or a limited set of indicators can provide all the information we need to assess the technological performance of a country, there is still a need to see to what extent are the technology patents capable of stimulating technological development. The decomposition analysis is as follows: We define the share of patents of country  $j$  in total world patents as:

$$v_j = \frac{\sum_i P_{ij}}{\sum_i \sum_j P_{ij}}, \quad (1)$$

Where:  $\sum_i P_{ij}$  = total patents of country  $j$

$\sum_i \sum_j P_{ij}$  = total patents on the world market

Also, the share of world patents of a country depends on its share of patents  $y_{ij}$  in sector  $i$  as well on the relevance of sectors  $i$  in the world patenting activity  $w_i$ :

$$y_{ij} = \frac{P_{ij}}{\sum_j P_{ij}} \quad (2)$$

Where:  $P_{ij}$  = total patents of country  $j$  in sector  $i$

$\sum_j P_{ij}$  = total patents on the world market in sector  $i$

$$w_i = \frac{\sum_j P_{ij}}{\sum_i \sum_j P_{ij}} \quad (3)$$

Where:  $\sum_j P_{ij}$  = total patents on the world market in sector  $i$

$\sum_i \sum_j P_{ij}$  = total patents on the world market

The change in a country's share of world patents can be further decomposed in three main elements:

$\Delta v_j = v_j^t - v_j^{t-12} = STE_j + TEA_j + TSE_j$ , (4) where  $t$  is the final year (2011) and  $t-12$  is the base year (2000).

$STE_j = \sum_i y_{ij}^{t-12} * \Delta w_i$  (5) is called the structural technology effect and measures the change in country  $j$ 's share of world patents, when the shares of its individual sectors remain constant over time. This indicator points out the direction of change and shows weather the country is gaining or losing patent shares, as a consequence of

its initial specialization in sectors that have developed their own technology and therefore patent more at the world level. Thus, this effect will be driven by the change of technological opportunities at the world level and will reflect the advantage/disadvantage in terms of overall evolution of the world patent shares, as a consequence of countries historical specialization pattern.

$TAE_j = \sum_i \Delta y_{ij} * \Delta w_i$  (6) is called the technology adaptation effect and measures the variation of the technological activities of country  $j$  within a sector  $i$  according to the changes in global patterns of technological opportunities. A positive technology adaptation effect means that the share of country  $j$  patents increases in sectors with a growing share on world patent activity, while a negative one suggests that the share of country  $j$  patents decreases in sectors with a growing share on world patent activity, meaning that country  $j$  is moving out of the sectors with high technological opportunities.

To shed more light on the situation in which a country increases or decreases its shares in both high (expanding) and low (declining) technological opportunities we further decompose this term into two distinct indicators (Laursen, 1999).

$$TAE_j = TGAE_j + TSAE_j \quad (6),$$

Where:  $TGAE_j = \sum_i \Delta y_{ij} \frac{\Delta w_{ij} + |w_{ij}|}{2}$  (7) is called the technology growth effect and is different from 0 only if  $\Delta w_{ij} > 0$  (if sector  $i$  has high technological opportunities at world level). A positive value shows that country  $j$  is moving into the sectors with high technological opportunities while a negative value shows that country  $j$  is losing patent shares in the sectors with high technological opportunities at the world level.

And:  $TSAE_j = \sum_i \Delta y_{ij} \frac{\Delta w_{ij} - |w_{ij}|}{2}$  (8) is called the technology stagnation effect and is different from 0 only if  $\Delta w_{ij} < 0$  (if sector  $i$  has low technological opportunities at world level). A positive value shows that country  $j$  is moving out of the sectors with low or declining technological opportunities, while a negative value shows that country  $j$  is gaining patent shares in sectors with low technological opportunities.

And the last indicator,  $TSE_j = \sum_i \Delta y_{ij} * \Delta w_i^{t-12}$  (9) is called the technology share effect and measures the change in patent shares of country  $j$  on the world market when the world patent structure remains fixed over time. In our case we consider the year 2000 as a base year for the world patent activities. So, if the structures of world sector patenting activities remain the same over the years, this effect can be interpreted as the “technological competitiveness” of country  $j$ . There are a lot of factors related to the so-called technological competitiveness that might trigger down or stimulate the gains or losses of patent shares. As some authors already emphasized in the literature, competences and quality of the human resources, the specialization in the high-technology sectors together with the development of the financial system seems to be important structural factors which are able to stabilize technological development (D.Archibugi et. al., 2010). The institutional framework plays also an important role for technological development, as there are many conditions that might conduct to innovation (R&D expenditures, access to venture capital, knowledge investments, the degree of product and labor markets flexibility, etc).

#### 4. Empirical findings

Table 4.1. highlights the results of the structural decomposition analysis of patent shares on the world market, based on the previously described methodology.

Table 4.1.: Patent shares and the rate of change of EU 27 countries, Norway, Switzerland, Canada, China, Japan and US on the world market (2000-2011)

Country	World patent share 2000	World patent share 2011	Total rate of change (%)
Austria	0,0022	0,0024	5,72
Belgium	0,0019	0,0022	16,29
Bulgaria	0,0002	0,0000	-85,73
Canada	0,0048	0,0049	1,39
China	0,0051	0,0403	691,26
Cyprus	0,0000	0,0001	128,14
Czech Republic	0,0003	0,0004	9,02
Denmark	0,0016	0,0020	20,65
Estonia	0,0001	0,0001	-26,38
Finland	0,0029	0,0029	-3,18
France	0,0188	0,0177	-6,31
Germany	0,0368	0,0382	3,93
Greece	0,0001	0,0003	321,05
Hungary	0,0002	0,0003	38,78
Ireland	0,0005	0,0008	55,98
Italy	0,0053	0,0051	-3,63
Japan	0,1327	0,1548	16,72
Latvia	0,0001	0,0001	-44,79
Lithuania	0,0001	0,0001	-23,03
Luxembourg	0,0003	0,0004	33,18
Malta	0,0000	0,0000	341,64
Netherlands	0,0066	0,0075	14,77
Norway	0,0011	0,0011	1,55
Poland	0,0009	0,0009	6,28
Portugal	0,0001	0,0001	36,50
Romania	0,0006	0,0002	-63,35
Slovakia	0,0001	0,0001	-29,82
Slovenia	0,0002	0,0003	63,77
Spain	0,0022	0,0025	15,01
Sweden	0,0061	0,0053	-12,39
Switzerland	0,0065	0,0083	27,18
United Kingdom	0,0110	0,0083	-24,46
United States of America	0,1129	0,1031	-8,68

Author's calculations based on WIPO Database

First table (*Table 4.1.*) offers an overview of the share of patents on the world market and the rate of change of patent shares of countries during 12 years, from 2000 till 2011. The best performing countries in our sample are by far Japan and USA, with the highest patent shares both in 2000 and 2011, followed by China, Germany and France. Although the US patent share on the world market might be partially explained by the home bias effect, Japan is still the leader, increasing its patent shares over the years and having a patent share of 0,1548 in 2011. We can clearly see that the country with the best performance regarding the rate of change of patent shares on the world market was China, which increased its patent shares over the

past 12 years with 691,26%. Other countries which increased substantially their patent shares are Greece, Malta and Cyprus, but the big distances among their rates of change make us conclude that China was the leader in gaining patent shares on the world market. A good explanation found in the literature for the technological development of China might be that China have gained momentum after 2000 (Di Mauro and Forster, 2008) and passed from the stage of original equipment manufacturing (OEM) to the stage of original brand manufacturing (OBM) due to international knowledge, spillovers from multinational corporations, access to foreign markets and improvements in manufacturing systems and processes. It seems China's rapid technological development is no longer due to the fact that is considered an attractive location for assembly production based on high-tech imports or because of its capacity to imitate foreign technologies, but because China is a fast catching-up country in terms of high-tech sectors. Although Greece, Cyprus and Malta made large gains in percentage terms, their share of world patents remained very low in 2011. The country that registered the lowest increase in the patent shares on the world market was Canada (1,39%) , followed at close distance by Norway with 1,55%. On the other hand, among the countries that have suffered a negative growth rate we mention Bulgaria, with a negative rate of change of -85,73%, followed at close distance by Romania with a rate of change of -63,35%. *Table 4.2.* shows the results of the decomposition analysis of patent shares and highlights various technology effects. Looking at STE column we can observe an overall trend among countries of having a negative structural technology effect, which means that they experienced problems in catching-up with the world's technological trend. Still, there are 10 countries (Canada, China, Estonia, Ireland, Japan, Lithuania, Romania, Sweden, Switzerland and US) whose initial specialization didn't influence their global change in patent shares.

Table 4.2.: Technology performance of the EU27 countries, Norway, Switzerland, Canada, China, Japan and US (2000-2011)

Country	STE	TGAE	TSAE	TSE
<b>Austria</b>	-0,000166	0,000013	-0,000051	0,000256
<b>Belgium</b>	-0,000116	0,000012	-0,000028	0,000410
<b>Bulgaria</b>	-0,000001	-0,000011	0,000011	-0,000155
<b>Canada</b>	0,000077	0,000109	-0,000057	0,000043
<b>China</b>	0,001147	0,004286	-0,003420	0,034947
<b>Cyprus</b>	-0,000003	0,000006	-0,000007	0,000047
<b>Czech Republic</b>	-0,000016	0,000006	-0,000002	0,000050
<b>Denmark</b>	-0,000003	0,000035	-0,000031	0,000346
<b>Estonia</b>	0,000006	0,000005	0,000003	-0,000018
<b>Finland</b>	-0,000113	-0,000135	-0,000070	-0,000185
<b>France</b>	-0,000527	-0,000026	-0,000147	-0,000835
<b>Germany</b>	-0,001806	0,000211	-0,000671	0,002792
<b>Greece</b>	-0,000006	0,000014	-0,000019	0,000208
<b>Hungary</b>	-0,000002	-0,000002	-0,000013	0,000072
<b>Ireland</b>	0,000068	0,000061	-0,000013	0,000262
<b>Italy</b>	-0,000342	-0,000043	-0,000076	0,000031
<b>Japan</b>	0,325446	0,310539	-0,041779	1,453556
<b>Latvia</b>	-0,000002	-0,000014	-0,000001	-0,000058
<b>Lithuania</b>	0,000000	-0,000003	0,000001	-0,000020
<b>Luxembourg</b>	-0,000007	0,000003	-0,000018	0,000099
<b>Malta</b>	-0,000005	0,000001	-0,000006	0,000039
<b>Netherlands</b>	-0,000337	0,000094	-0,000193	0,001209
<b>Norway</b>	-0,000030	-0,000005	-0,000004	0,000038
<b>Poland</b>	-0,000058	-0,000001	-0,000021	0,000090
<b>Portugal</b>	-0,000005	0,000004	-0,000005	0,000039
<b>Romania</b>	0,000167	-0,000064	0,000180	-0,002035
<b>Slovakia</b>	-0,000003	0,000015	-0,000008	0,000138
<b>Slovenia</b>	-0,000003	0,000015	-0,000008	0,000138
<b>Spain</b>	-0,000077	0,000029	-0,000030	0,000403
<b>Sweden</b>	0,000023	-0,000119	-0,000007	-0,000901
<b>Switzerland</b>	0,014334	0,032088	-0,011212	0,236600
<b>United Kingdom</b>	-0,000110	-0,000235	0,000246	-0,002564
<b>United States of America</b>	0,003502	-0,000350	0,000277	-0,013375

Author's calculations based on WIPO Database

Technological competitiveness (Technology Share Effect) has a major role in determining whether a country is losing or gaining patent shares. We can observe from the table 4.2. a connection between the technology share effect on one hand and the technology growth and technology stagnation effects on the other hand. Thus, the countries with a positive TSE effect have in the same time a positive technology growth effect and a negative or close to 0 technology stagnation effect. On the contrary, the countries with a negative TSE effect have a negative technology growth effect and positive or close to 0 technology stagnation effect, although there are a group of countries that have both technology growth and technology stagnation effects negative. The fact that technology share effect is negative means that the countries are losing overall patent shares and they are not technological competitive

at the world level. This is part confirmed by the positive correlation between the TSE effect and the technology growth effect and by the negative correlation between TSE effect and technology stagnation effect. The table shows a heterogeneous picture of the countries in the sample and pictures an overall trend between the countries that increased their patent shares over the years and moved into high technology opportunity sectors while gaining patent shares in the sectors with low technology opportunities. There is still one country which makes an exception from this pattern, and that is Slovakia, which despite the fact that it behaved according to the pattern, suffered a decrease of its overall patent shares.

## **5. Conclusions**

These descriptive statistics helps us determine the overall degree of technological development of countries in our sample. The technological development of the world market has an important role for the patenting activity of countries, being highly related to a well-developed infrastructure. The analysis points out that there are still a lot of European countries facing problems related to the technological infrastructure and technological capabilities. Countries that managed to keep their market shares high and also to increase their market shares over the years, while taking advantage of high opportunity sectors at the world level are the real leaders in terms of technological development. Among these countries we mention China, Japan, US, and for the European states Germany, France, Netherland, and not least, Switzerland. In 2000, EU27 had a patent share of 9,92% on the world market, while in 2010 its patent share remained relatively constant, with a slight decrease of 0,10. Japan was by far the leader in patent shares, both in 2000 and 2011, with a share of patents on the world market of 13,27%, respectively 15,49%. Another economic and technological power, the US, registered a patent share of 11,29% on the world market in 2000 and 10,31% in 2011. Although the patent share of EU 27 registered a slight decrease, it's lagging behind Japan in terms of technological development, measured throughout patents. A good example of catching up is represented by China, which increased its patent share from 0,51% in 2000 to 4,03% in 2011. Other countries outside EU27, like Canada, Norway or Switzerland had also significant patent shares, increasing their patent shares during these 12 years and consolidating their position on the world market. Although the U.S. and Japan are clearly the most technologically advanced countries in the world, other countries are making advances that may allow them to catch up to the U.S. and Japan in the future. China, India, Brazil are all countries that are making impressive technological gains. Even though U.S. is the leader in many different fields when it comes to technology, is surpassed by Japan when it comes to computer technology. Japan currently has the most powerful supercomputer in the world; the country with the second most powerful supercomputer is China, and the U.S. has the third fastest supercomputer. Japan also leads the way when it comes to consumer electronic technology; however, Japan trails the U.S. in all other areas.

The decomposition analysis also raises attention on several states that are performing very poorly regarding the patenting activity. These countries should concentrate on their overall capacity to innovate, to increase the R&D expenditures, to improve their institutional framework and undergo profound structural reforms. Deteriorating the patent shares of countries on the world market might hamper them in exploiting the potential to catch-up with the developed ones. What were considered up to now to be the problems facing by peripheral countries when talking about overall competitiveness is no longer true, at least not entirely true: their lack of

competitiveness vis-à-vis the developed countries is no due to the fact that their wages are substantially lower or that labor productivity has not increased. The reality is that they are stuck at middle levels of technology and they are caught in a trap. The outcomes highlighted by our approach can serve as an important proof that countries that attained high levels of patent shares are among the most technological competitive countries at the moment. The patenting activity and patenting infrastructure should represent an important goal for the countries government's and for their policy-makers.

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# SMART FABRICS: A CASE STUDY IN INDUSTRIAL REVIVAL

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**Abstract:** *The movements on the world market suffered by the traditional textile industry bring us nowadays to reconsider the rebirth of the textile industry on new coordinates by the concentration of the latest technologies in order to satisfy the more and more demanding requests of the consumer. This paper tries to emphasize the idea that revitalization on a territory where there had been a strong development of a traditional textile industry in the past is possible now by configuring a new industry by means of some leader companies in their field of activity which create and develop new value sources with the advantages of the variant which integrates the latest interdisciplinary technologies, the so-called “key enabling technologies” (KETs), such as the microsystems, the smart materials, nano- and bio-technologies, and photonics. The KETs have a key role in creating the so-called industry of smart fabrics as it is shown in this summary case study for this very new born industry. All these technologies enable the appearance of some products fundamentally new of high interest, which furnish substantial economic advantages and involve industries with which they had no connection in the past. The main vectors in this effort of industrial transformation are the companies which are the best placed on the market of new industrial technologies generally called KETs, which combines the new ideas of economical organization through an intensive use of capital with the sustained effort of research-development, the usage of highly qualified labour force, and their geographical positioning at the points which best respond to their operational requirements. The competitive disadvantages of some countries with respect to the cheap labour force and the supply of raw materials essential for textile industry can be compensated by the re-orientation to the configuration of a new model of smart textiles and finally will contribute to re-launch the economic activity passing through recession, particularly in the areas more prepared from the point of view of high qualification and technical specialization.*

**Keywords:** KET; smart textiles; reindustrialization; competitiveness.

**JEL classification:** L67; O33; M16.

## 1. Introduction

Traditionally, the textile industry was developed based on the raw materials furnished by the agriculture and it used a labour force with the lowest qualification. These input features of industry expanded its geographical area to the zones with cheap labour force, which also had the capacity of satisfying the increasing demand of textile products at the global level.

As European Competitiveness Report (2012) shows due to the globalization, to the improvement of transport conditions and of technology, the production based on outsourcing enabled the strong optimization of costs and the development of

production relations so that various stages of the technological process are deployed at the most efficient locations on the globe, which ensure the best possible industrial performance. This process also features another characteristic: the sophisticated products are the least likely to be included in the outsourcing phenomenon. In the presence of crisis phenomenon, the companies also tend to reduce the outsourcing and to keep their business on the national territory as assistance between the local companies inside the value chain.

The changes on the global market imply the adaptation of business to the best condition of price, quality, innovation, but they should also take into account at the same time the environmental restraints and create their own development opportunities. This painting of the movements on the world market suffered by the textile industry in particular, brings us in front of the question whether it is possible the revitalization of this industry on a territory where there had been a strong development in the past. Theoretically, the revitalization is possible in two variants: by upgrading the traditional industry by using the already accumulated expertise or by configuring a new industry by means of some leader companies in their field of activity which create and develop new value sources (Chiarvesio et al., 2010).

This paper intends to present a summary case study for a very new born industry as an alternative to the traditional one which integrates the latest interdisciplinary technologies, the so-called “key enabling technologies”, such as the microsystems, the smart materials, nano- and bio-technologies and photonics and creates the so-called “smart fabrics” industry. From the beginning a definition for this industry will be developed for a better understanding of its determinants regarding the competitive advantage in the new context. Due to the effort of research-development implied, the best approach starts from the involvement of strong companies which can reconfigure the industrial landscape because of their presence on the market at a significant level. They would seek for the best location both on the international arena, and at the national level, in so-called clusters. The way they approach the business is studied in the following sections.

## **2. Smart fabrics: industry boundaries and key competitive determinants**

### **2.1. The theoretical approach of a general concept of industry**

Some studies (Ghemawat, 2010) show that generally the industry structure defines the business landscape through the conduct of the buyers and sellers. Michael Porter presented the “five forces” framework for an industry analysis which is made by suppliers, new entrants, industry competitors, substitutes and buyers, but the main problem of the industry definition is to draw the boundaries of the business landscape. Sometimes the boundaries should be the segments that the business operates or the technology can be the delimiter. Regarding the things in their dynamic, each Porter’s force can modify the business landscape and redraw new boundaries of the industry. When an industry becomes poor or less attractive, new opportunities get born by migrating to more attractive settings. For a single company it’s difficult to change the entire structure of the industry, but its action can open a door to a more attractive direction and other players on the market can use this as a management tool. The success or the failure for the new business is in fact the result of interactions among firm’s choices as parts of its strategy. For getting a competitive advantage the business must be different from another one and offer a higher value which has to be unique. Theoretically a competitive advantage over the rivals

“depends on driving a wider wedge between costs and buyer’s willingness to pay than one’s competitors can” (Ghemawat, 2010:64) but nowadays as Ralph Emerson anticipated “it’s better to strive for an edge over the competition” (Ghemawat, 2010:44). In our industry case, the “edge” means technology.

## **2.2 “Key Enabling Technologies”**

The contribution of these technologies means more than the increase of certain parameters of competitiveness. It actually means the appearance of some products fundamentally new of high interest, which furnish substantial economic advantages, thus responding to some of the most various requirements and involve industries with which they had no connection in the past.

From the conceptual point of view, KETs are defined in the European Competitiveness Report (2010) as incorporating a high percentage of research and development (R&D), the intensive use of capital and of a highly qualified labour force within extremely fast innovative cycles. They refer to the microsystems, the smart materials, nano- and bio-technologies, as well as photonics. The small and medium enterprises, by their development dynamics, are the vehicle by means of which these technologies manifest multidisciplinary, thus imprinting within their industrial area a character of convergence and integration. Many times, these enterprises develop in a large number within the so-called clusters, where the technological and commercial development enables their affirmation as key factors for the national development and creation of jobs. The central point of interest of an innovation project is the determination of a fair relationship between the research expenses and the capability of covering them by the sale price, an activity in which there are involved the business partners, the suppliers, distributors and customers. At the national level, there is streamlined the increase of productivity and welfare by the efficient use of the production factors and of the changes of industrial structure.

The following KETs concepts and statistical data are taken from the European Competitiveness Report on 2010, which used the information gathered in the period 1991 - 2005.

### **2.2.1. Nano-technologies**

Historically, they appeared in the 60s and they refer to the design, manufacture and use of structures at the molecular level, with dimensions smaller than 100 nm. The structures built at this scale feature electrical, magnetic, mechanical, chemical, biological, and optical characteristics much different from those at the macro scale. These changes of properties and characteristics are the engine of innovative power of the nano-technologies and they enable applications in all the fields where the materials are used. The most active zones in the world in the patent applications are Northern America, Eastern Asia, and Europe. In the rest of the world, the applications are at a low level. In Europe, Germany has the biggest number of application patents of the nano-technologies (34%), followed by France (17%), Great Britain (14%) and The Netherlands (8%). Without exhausting their huge potential, most of the products trade so far are currently based on the creation of nanostructures of carbon, silver and gold and metal oxides which have applications in all the fields, including the textiles.

In 2010, the Nobel Prize for physics was awarded for the discovery of a bi-dimensional structure of carbon atoms, which was called graphene. The structure has special mechanical properties which enable the resistance to extreme efforts,

being at the same time a very good conductor of electricity and transparent. The applications are in all the fields implying the use of materials with high resistance and which use very small quantities of raw material as it is shown at:

[http://www.nobelprize.org/nobel\\_prizes/physics/laureates/2010/advanced-physicsprize2010.pdf](http://www.nobelprize.org/nobel_prizes/physics/laureates/2010/advanced-physicsprize2010.pdf)

By comparison with the traditional textile industry which implies very high consumptions of raw materials, the use of these technologies allows a very small consumption of raw material with mechanical and electric properties higher than the traditional technologies.

### **2.2.2 Electronic Microsystems**

They refer to the highly miniature semiconductor components integrated in products with large physical volume. The miniaturization is a factor which reduces the costs, helps in the fast long range transportation and enables the transformation of any product into a so-called “smart” one. The recent successes in miniaturization actually meant the combination of semiconductor technologies with the field of nano-technologies, as the silicon structures decreased to dimensions below 100 nm. Countries in Eastern Asia started to dominate the patent market in this field from 2001, followed by Northern America and then Europe; the rest of the countries have limited values for being recorded by the statistics. In Europe, Germany dominates by 41%, and then France 16%, The Netherlands 12%, and Great Britain 11%. Traditionally, the applications of electronic microsystems became applications such as memories, displays and processors, as well as products which enabled the communication between various components or systems. In the last years, the miniaturization extended to fields such as cars, medical and household appliances. The expansion of systems to other sectors shall continue, having a more and more important connection with the nano-technologies and advanced manufacture technologies.

### **2.2.3. Bio-technologies**

These mean the use of microorganisms in the industrial processes of production of bio-materials, bio-fuels and, finally, the manufacture of textiles, leather and paper products. The bio-technology has the advantage of being environmentally-friendly, as it relies less upon the use of traditional energy resources, while it recycles what we usually call “waste”, which are raw materials for that industry. In the world classification of patents of bio-technologie, Europe is on the first place, followed at a small distance by Northern America, each with about 35% of the market, and then Asia 23%. In Europe, the patent market is dominated by countries such as Germany, Great Britain, France, and The Netherlands.

### **2.2.4. Advanced Materials**

These are the materials which have an internal structure enabling properties much enhanced than the traditional materials. Their importance is proved due to the special applications which they have in all the industries, and they help in the reduction of costs while increasing the performance, which means the increase of competitiveness. We should not omit their positive impact on the surrounding environment in comparison with the traditional products. The trend is to increase the number of applications for each newly discovered material by an average of 8, 6 applications per newly discovered material. The zones of applications cover the entire industrial spectrum: constructions, car industry, aviation, energy, medical,

automations, semiconductors, textiles, appliances and security. Europe represents about half of the patents for advanced materials, 30% Northern America, and 20% Eastern Asia. In Europe, Germany covers 50% of the patents, followed by France 14%, and Great Britain 10%.

### **2.2.5. Photonics**

These are defined as a branch of science and technology which uses the photons as carriers of energy and information, thus replacing step-by-step the role which belonged in the past to electrotechnics and electronics. Although it started in the 60s, the scientific foundations were placed by Einstein, who discovered that the light consists of elementary units which he called “quantum” and we call them photons. The development of electronics, of laser technologies, of optic fibres, enabled the creation of proper environment for the development of optical communications and the appearance of photonics, which combine subjects such as physics, nano-technologies, material science, bio-technology, chemistry, and electric engineering. The photonics is by excellence a „green” technology which enables the transport of energy without losses and the conversion of solar energy into other forms of energy. Interesting in this field is the fact that by 2001, Europe, Northern America and Eastern Asia were sharing equally the patent market. While Europe and Northern America remained with approximately equal percentages (29% Europe and 27% Northern America), Eastern Asia reached a quota of 42% of the total number of patents. The market potential of nano-technologies at the level of 2008 was of 150 billion dollars, and it is estimated for 2015 an amount of 3,100 billion dollars, which means an annual increase rate of 46%. With respect to the microsystems, in 2008 the market was of 250 billion dollars, with an estimate at the level of 2015 of 350 billion dollars, which means an increase of 13%; the bio-technologies are estimated to increase from 90 billion dollars \$ in 2008 to 150 billion dollars, with an increase rate of 9%; the market of advanced materials shall increase from 100 billion dollars in 2008 to 150 billion dollars, with an annual increase rate of 6%, and the photonics shall increase from 230 billion dollars in 2008, to 480 billion dollars in 2015, with an increase rate of 8%.

All the information above shows a very high potential of development for these technologies, with many potential applications at the stage of commercial testing or as concept which strongly interfere. Even if the increase rhythm indicates a potential risk as well, the market values prove that these risks are worth being taken. In addition to their market values, their use presents substantial advantages which means a low consumption of raw material and energy, the preservation of surrounding environment, a very wide range of applications, the use of highly qualified labour force, the creation of new business, the national development and, last but not least, the achievement of a high degree of satisfaction of the final users.

### **2.3. Role of “Key Enabling Technologies” In Configuring the Smart Fabrics Industry**

The textile industry, as it is traditionally known, is no more a profitable branch, in spite of huge investments, due to the high competition (Golra et al., 2011).

In order to face the strong competition, the entire manufacture process needs to be changed through the integration of technologies based on real time information. The concept of “smart manufacturing” was developed, which refers to the understanding and perceiving the reality in real time, and implies a rigorous planning and

coordination of the entire manufacture process. It integrates analyses of data based on advanced perceptions, under conditions of minimum consumption of materials and energy, and of maximizing the effects, which finally ensures the economic competitiveness of a country (Davis et al., 2012).

In order to outrun the current crisis and to create the conditions of economic development of a country, it is imposed the increase of investments in the process of innovation by intensifying the activity of research-development (Coccia, 2012).

The industry of smart textiles marks the beginning of a new industrial era by combining the traditional textile industry with other fields, such as IT, electronics, communications, design, where the research outcome in each individual field has impact on the creation of a new design of this industry. The central element is constituted by the individual with his needs of protection and defence, which are more and more satisfied by the integration of research in the above-mentioned fields with applicability in the areas of civil defence, military, medical monitoring, or location (Jayaraman et al., 2006).

The smart textiles originate in the field of chemical textile products which strongly developed starting from the 60s – 70s. In time, the technical materials were improved, but it was still considered that they fail to fully respond to the expectations. According to their usage, the technical textiles are classified into 12 categories (David Rigby Associates, 2010): agrotech (agriculture, horticulture, forestry), clothtech (technical components of footwear and clothes), hometech (components of furniture, household or floor coverage), medtech (hygiene and medicine), oekotech (environmental protection), protech (personal and property protection), builtech (constructions), geotech (geotextiles, civil constructions), indutech (filtration, industrial purification), mobiltech (cars, expeditions, railroads and air-spatial), pachtech (packaging), sportech (sport and leisure).

Currently, the way leads to the following level of transformation of the technical products as Jayaraman et al. (2006) show by the incorporation of sensors and microsystems inside the product or tissue. The new technology creates the concept of “smart clothing” and opens the way to new horizons of applicability. The research is directed towards a series of performance measurement parameters, by taking into account aspects related to costs, manufacture procedure, degree of ensuring the protection, the threat response.

The creation of “smart cloth” implies a hierarchic process (Bahadir et al., 2012) combining the textile materials with systems able to sense and generate response to the external stimuli (Spontak et al., 2009).

At each level there are elements making the clothes become more interactive, intelligent and ensure the information processing, by the integration of hardware and software (Bahadir et al., 2012).

Begrache et al. (2010) show in a study that the first projects associated with “smart cloth” were applied by American Army and NASA, which were involved in the creation of the equipment that could adapt to a hostile environment. The pioneer project was called MotherBoard, it was developed by Georgia Tech University for NASA, and it represents a suite that could detect the vital signs of the carrier, by means of integrated optic fibres. Starting from 1990 until nowadays, companies in Europe were intensively involved in the field of integrating the electronics into textiles. The current research in the field of smart textiles rely upon the integrated components conferring sensorial perception, “actuators” – monitoring of some

parameters, source of energy, data transfer, computer processing, connectivity, user interface (control and/or display).

As Jayaraman et al. (2006) show the fabrics used for “smart clothing” involve a structure of materials which allows it to be made according to the size of its carrier, to adapt to the conditions of land, to be pre-configured and re-configured according to the needs, to be resistant, comfortable when washed, easily wearable, to be easily decontaminated, easy to make and cheap. The fabrics should be lightweight, flexible, resistant, and to adapt to the shape desired upon manufacture; thus, they can be created of various elements, of newly discovered threads and fibres by new manufacture processes which allow their adaptability to the environment; they should allow the incorporation or attachment of various electronic devices.

The latest and most dynamic field of innovation with perspective of continuous development is incorporating the KET’s mentioned before and creating the “smart fabrics” considered as the industry of future, which shall use the most highly qualified labour force.

The European Competitiveness Report (2010) indicates the current applications of nano-technologies in the textile industry refer to the nano-particles for preventing the contamination, the silver nano-particles for antibacterial textiles and the nano-containers for the impregnation with certain flavours. There were recently launched materials with titanium oxides obtained by nano-technology for the protection against ultraviolet rays, nano-gels for the thermal protection and ceramic nano-particles for the resistance to abrasion. At the stage of research there are the textiles which have integrated the nano-sensors and actuators for controlling the operation of human body, and textiles which have integrated digital control nano-systems.

As a conclusion to the above, we could say that the borders of smart fabrics industry are actually provided by the technological borders in several fields which are in a permanent dynamics and interconnectivity.

#### **2.4. The Development of Business Environment in the Reconfiguration of the Textile Industry**

The appearance of new technologies determines the appearance of new standards of manufacture, innovation, creation, organization and delivery (Davis et al., 2012). In his study Jolly (2012) shows the way of organizing the industry determines the entry barriers. When a new technology becomes attractive and is the creator of a new business, there will be numerous companies interested in entering the market, due to a low entry barrier of the market, but also because each company will try to impose its own technical standard in the market. In time, the number of companies on the market in the respective field will increase, which means that the business is attractive. If any company succeeds in imposing their own design on the market, the other will have low chances of imposing their standards. The design imposed on the market refers to a certain technology implemented, which becomes attractive for many others. It means that there will be many companies on the market when there will be attraction for a certain technology. The selectivity criterion of a technology takes into account financial classic aspects, such as the recovery rate of investment, or cash-flow, the main objective being the maximization of potential income by risk unit. In general, the technological analysis envisages two aspects: its importance in the future – as a volume and life cycle – and the power it confers to the company as compared to the competitor companies. Another criterion of analysing the technology refers to its lifetime, which also incorporates the life cycle of the product.

A third criterion for selecting the technology refers directly to the mode of applying the patents: on the one hand, it reflects the attraction towards the respective technology by a high demand for that patent or, on the other hand, it shows the position of the company by applying the respective patent. There are situations when there was attraction from the companies towards a certain technology, but the products resulting from using it failed as there was no real demand from the customers existing on the market. Therefore, the commercial outcome is another important criterion in using the technology and thus, all the financial aspects derived from them (costs, benefits, value perceived by customer). In the case of entirely new technologies, it is difficult to estimate the potential the technology market is completely new. In this case, there is considered that as the technology is more attractive and covers the highest volume and depends on the geographical coverage, on the demand, the duration of usage, the range of applicability in various fields or in various market segments.

The location characteristics influence the activity of the companies involved in the field of nano-technologies are small or medium and are incorporated into a chain of value creation. Schimke et al. (2013) argue that these companies can only operate in regions with high degree of regional specialization, being the users of well-trained external labour force. There are situations when the regional specialization is counter-productive for the companies of nano-technology, as the level of qualification of the labour force is extremely important. Usually, the nano-technology is a creator of highly qualified labour force and the activity is carried out by clusters. Qing (2012) shows that most of the clusters have the support of local governments, which created favourable institutional environment and policies. By these measures, the entire arsenal of geographical, cultural, and business factors are valued thus ensuring the conditions for obtaining profit and creating new industrial branches besides those traditionally existing in the area, as well as the formation of specialized labour force and the increase of opening degree of the area, which should finally enable the attraction of capital and the intensification of entrepreneurial activity.

The entrepreneurial activity is a creator of economic development if it implies a high degree of innovation. As Lerner (2012) explains, the governments have the essential role of providing the conditions of a healthy entrepreneurial environment, which ensures the access of talents in a country by a flexible system of visas, enables the fluctuation of labour force between companies, provides the conditions of an efficient educational system for creating the future qualified labour force and finally, ensures the advantageous taxation policy. Also, the government has an essential role in providing the best conditions for dealing with the innovations, as well as in establishing clear rules of patent awarding. A modality of entering the market which is specific to the companies operating in the field of high technologies is presented in the form of the concept of "hybrid model", which combines the research activity in a laboratory and a start-up company sustained by an investment fund.

The development of business environment related to the smart textile industry depends on the creation of conditions for the investment by providing a friendly entrepreneurial environment, on the orientation of capital to the fields with high potential of development, which should use the highly qualified labour force, and on the type of technology implemented.

### 3. Conclusions

The traditional textile industry is in full transformation at the world level. The competitive disadvantages of some countries with respect to the cheap labour force and the supply of raw materials essential for this field can be compensated by the re-orientation to the configuration of a new model of industry, the one of smart textiles. And the main vectors in this effort of industrial transformation are the companies which are the best placed on the market of new industrial technologies generally called KETs, which combines the intensive use of capital with the sustained effort of research-development, the usage of highly qualified labour force, and their geographical positioning at the points which best respond to their operational requirements.

The advantages of creating and developing such an industry are the following:

- Low consumption of raw materials;
- Preservation of surrounding environment;
- Application of results in a wide range of fields with impact on the development of the entire economic environment;
- Usage of highly qualified labour force;
- Assumes the implication of Government in the creation of conditions for the development of a friendly business environment for the companies using the highest technologies, and the training and education of the labour force necessary for advancing in that direction;
- It means the future for a traditional industry;
- International cooperation in scientific matters.

All these will re-launch the economic activity passing through recession, particularly in the areas more prepared from the point of view of high qualification and technical specialization. And the Government is required to lay optimally the economic environment on coordinates favourable to such a process. This work responds to such challenges, by telling us how we could take benefit of this effervescence in the active areas of technical research, of the industrial and business development.

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# OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT IN ROMANIA IN VIEW OF THE ECONOMIC DEVELOPMENT OF SOCIETY

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**Abstract:** *Health and safety at work has become one of the most substantial and important sectors in the EU social policy over the last years. In Romania, the implementation of health and safety management systems is performed by: a systematic approach to problems, training and awareness, effective and efficient tools for managing a company's specific issues as well as involvement at all its organizational levels. The article deals with the implementation of the management systems for health and safety at work, which complements the enterprises' existing organizational system and promotes enforcement of the legislation regarding health and safety at work. Creating a healthier and safer working environment is a goal that exceeds the resources and expertise of a single institution or a single country.*

**Keywords:** *management; security; health; work; best practices; prevention, awareness.*

**JEL classification:** *J28*

## 1. Introduction

Health and safety at work has become one of the most substantial and important sectors in the EU social policy over the recent years.

The European Community Strategy is based on setting up and reinforcing a culture of risk prevention, on combining a variety of tools for the implementation of the Community policies: legislation, social dialogue, technical progress and best practices, corporate social responsibility and economic incentives – and on building partnerships among all the actors on the stage of health and safety at work.

The Management systems for health and safety at work come in support of the implementation of the Community Strategy by:

- systematic approach of problems in the field;
- emphasis laid on training and awareness as important elements of culture concerning health and safety at work;
- creation of some effective and efficient management tools for managing the company's specific issues;
- involvement at all levels of an organization.

## 2. National Approach

The number of units that have already implemented the management systems for safety and health at work is still rather low, among the factors that have led to this situation we can mention:

- the short term to enact the mandatory requirement of implementing the system and quite a long time for completion;
- a shaping internal market in terms of the interest in health and safety at work;
- a very new and complex legislation in the field which still lacks the effective enforcement tools;
- a lack of tradition in global performance analysis on various business sectors/areas which could highlight the benefits of implementing the management systems;
- a poor flow of information.

The similarities between the EU directives and the elements of the management systems safety at work are presented in Table. 1.

**Table 1** Elements of the EU Directives and elements of the management system

<b>Elements of EU Directives</b>	<b>Elements of the management system</b>
Risk prevention	Emphasis on preventive actions
Empowering leadership at the highest level	Declared commitment management
Employees' awareness and training	Training - Awareness
Risk assessment	Risk assessment
Permanently decreasing the risks cannot be eliminated	Continuous improvement

Occupational health and safety management is the missing link in the development and implementation of integrated management systems: quality, environment, labor, according to the new European and international trends

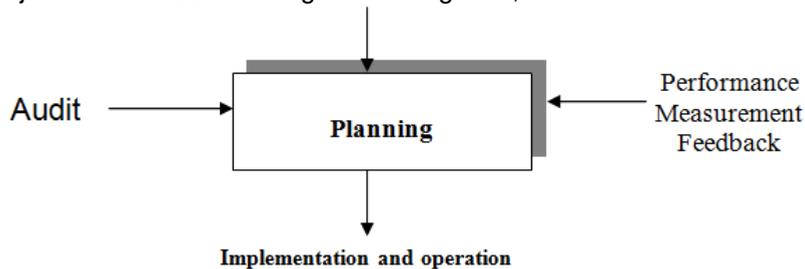
The implementation of management systems complements the existing organizational system within enterprises and promotes the regular application of health and safety at work legislation, integrating this area into the general management unit.

**Table 2** Approach of the work system elements within the management systems

<b>POLICY</b>	- observance of the permissible limits for the risk factors value = minimal objective
<b>PLANNING</b>	- objectives which are easy to quantify, pursue and verify; - direct reporting to vast, accessible secondary and tertiary legislation
<b>IMPLEMENTATION OPERATION</b>	- large number of records; - complex, specialized operational control ; - specific data (values of risk factors, calculation models and simulation) to establish measures for emergency response
<b>VERIFICATION OF CORRECTIVE ACTION</b>	-measurement possibilities according to approved methodologies; - inter-comparison of results.

The elements of the planning stage are:

- Hazard identification, risk assessment and risk control;
- Legal provisions and other requirements;
- Objectives and OSH management Programs;



**Figure 1: Planning**

### **3. Objectives and Program**

The objectives must be in accordance with the policy and commitment for continuous improvement. Setting goals and objectives can be achieved within the management team.

Objectives should be:

- specific
- measurable
- **accepted**
- **feasible**
- should be within the limits
- established, maintained and documented;
- consistent with the legal requirements and with other requirements of the organization; with the risks identified in the assessment; with the organization's technology; with the organization's financial possibilities
- consistent with the commitment to continual improvement expressed in the policy.

**The OSH Management Program (PSSM)** - is a process that turns long-term general commitments in a short and medium term action plan through general and specific objectives. OSH management program contains clear, measurable objectives, set in accordance with

- OHS policy;
- identified priorities;
- risk assessment results.

### **4. Organization of prevention and protection activities within companies**

Organization of prevention and protection activities is provided by the employer in the following ways:

- by the employer's assumption of the duties necessary to implement the measures stipulated by the Law no. 319/2006;
- by designating one or more workers to carry out activities of prevention and protection;
- by establishing an internal service for prevention and protection;
- by resorting to external services for prevention and protection.

The employer's assumption of conducting prevention and protection activities according to art. 16 HG 1425-2006 by designating one or more workers to carry out the prevention and protection activities and by establishing an internal service for prevention and protection or resorting to external prevention and protection services (7,8)

**Table 3** Prevention service type

No. of workers	Prevention service		Oservations
	internal	external	
1-9	Employer		*)
1-49	Employer / designated worker	Risk assessment specialist	
1-49	Designated worker	Risk assessment specialist	activities from Annex no.5 of H.G.1425/2006
50-149	Designated worker	Risk assessment specialist	activities from Annex no.5 of H.G.1425/2006
50-149	Designated worker		
Over 150	Designated worker		

\*) if the following conditions are met cumulatively:

- micro or small enterprises;
- the activities carried out within the company are not referred to in Annex 5 of HG nr.1425/2006;
- the risks identified may not generate accidents or professional diseases with serious, irreversible consequences, respectively death or disability;
- the employer carries out his/her professional activity effectively and regularly within the company/unit;
- the employer meets the minimum requirements for training in the field of health and safety at work, corresponding to a basic level at least (7,8).

Prevention and protection activities carried out within the enterprise and/or unit are:

1. identify the hazards and assess the risks;
2. develop and maintain the prevention and protection plan;
3. develop their own instructions for completing and/or enforcing the health and safety at work regulations taking into account the particularities of the unit/enterprise activity as well as those of the workplaces/positions;
4. propose the tasks and responsibilities in the field of health and safety at work, incurred by workers, according to the functions performed, which shall be recorded in the job description approved by the employer;
5. verify the knowledge and application of the measures provided in the prevention and protection plan by all workers , as well as of their duties and their responsibilities in the field of health and safety at work, set in the job description;
6. draw up the technical documentation necessary for informing and training the workers in field of health and safety at work;
7. develop themes for all the stages of training, establish appropriate periodicity for each job, provide information and training for workers in the field of health and safety

at work, and check knowledge and application of information received by the workers;

8. develop training-test program for the enterprise and /or unit;

9. ensure preparation of the action plan in the event of serious and imminent danger, and make sure that all employees are trained to apply it;

10. highlight specific and high risk areas;

11. determine areas requiring occupational health and safety signals, establishing appropriate signal type and location according to legal requirements;

12. record the trades and professions, provided by specific legislation, which require authorization in order to be practiced;

13. record the workstations that require additional medical examinations (2,3).

## **5. Competence, training and awareness**

Minimum requirements for training in health and safety at work

*The levels of training in the field of health and safety at work necessary to achieve adequate capacities and skills for performing prevention and protection activities are: basic, intermediate and higher level*

The minimum training requirements in the field of occupational health and safety at work for the *basic level* are: secondary education; a course in the field of health and safety at work, lasting at least 40 hours.

- The minimum training requirements in the field of occupational health and safety at work for the *intermediate level* are: technical secondary education, a course in the field of health and safety at work, lasting at least 80 hours.
- The minimum training requirements in the field of occupational health and safety at work for the *higher level* are: technical higher education; a course in the field of health and safety at work, lasting at least 80 hours, a postgraduate course in risk assessment, lasting at least 180 hours. (9,10)

## **6. Good prevention practices**

DuPont Principles - Good health and safety practices at work

- All injuries can be prevented;
- The management, from top level up to the frontline supervisors, is responsible in terms of injury prevention;
- Combined energy of all organizations is necessary to ensure continuous improvement and achieving excellence in the field of safety;
- All occupational exposures that could result in injury or occupational diseases can be controlled;
- Security is a condition related to the workplace;
- Recognition of the necessity to train employees in order to work safely;
- The management must audit the performance at the workplace in order to assess the success of the security program
- All deficiencies must be promptly addressed
- Security is a constituent part of each activity but security is, at the same time, a part of everyone's life.
- Security is a good deal
- Security should be integrated as an essential approach and personal value (2,5,11)

## 7. Conclusions

Occupational health and safety is at the forefront in the national social agenda, from both economic and humanitarian reasons.

Intellectual resources of an organization include all intangible values, knowledge-based that can be: described, measured, turned into value and developed in accordance with current business and future prospects. Human capital consists of elements such as knowledge, skills, abilities and work capacity including aspects of physical and psychological health.

The role of health and safety at work is essential to enhance the companies' competitiveness and productivity through the positive effects it produces: reduces the cost of accidents, incidents and occupational diseases and increases motivation. Accidents and professional diseases are an enormous burden on public and private welfare systems and require an integrated, coordinated and strategic answer, as well as cooperation of the key stakeholders in national policy making.

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## WORLD TRADE ORGANIZATION – REFORM IT OR CHANGE IT?

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**Abstract:** *The failure of Doha Round is a serious step backward for the WTO and the multilateral trading system. Some analysts already discussed in their research about the round as being already closed and they propose the developing of a new program within the organization. WTO still remains a very important institution due to its proven role in encouraging states not to take protectionist measures during the recent economic crisis, but the global trade governance reform must reflect all the changes and realities. The transition is being made toward a more regionalized and preferential global trade and the emergence of strong developing countries shape the whole multilateral trade negotiations. The important growth rates in emerging countries are translated also in strong demand for representation in global trade governance.* **Objectives:** *This paper aims to underline the role of multilateralism as form of international cooperation, the link with global economic governance and what concerns academic community in terms of having a reform of it.* **Prior Work:** *It has been tried to emphasizing the concepts already developed by known researchers in the field.* **Approach:** *The approach is a more theoretic one done in a comparative manner with emphasis on results and future research. The critical method approach is done with qualitative results.* **Results:** *The key results are related to pros and cons of reforming the World Trade Organization, as well as presenting the criticisms and proposals for having a second World Trade Organization.* **Implications:** *The implications are varied in terms of studying the concepts and addresses researchers in the field, but also lecturers and students.* **Value:** *The main added value is the compared approach of the traditional WTO as it derived from General Agreement on Tariff and Trade and the proposal for a new one and its formal relationship with the global economic governance.*

**Keywords:** international trade, reform, legitimacy, Doha Round

**JEL classification:** F02, F13, F55, O19

### 1. Introduction

Like many other international organizations, World Trade Organization (WTO) is at crossroads in terms of ideas and problems. There is a noticeable imbalance between the dispute resolution mechanism and the provided platform for multilateral trade negotiations. While the existing rules, supported by a strong dispute resolution mechanism, have provided the platform to mitigating some effects of the economic crises, international negotiations haven't provided concrete results since 1990's. It became obvious that the old methods are no longer feasible and require completely new thinking about the organizational needs of WTO.

### 2. Criticism and Critics

Most current debates about WTO refer to the legitimacy and effectiveness of its decisions (Ziegler and Bonzon, 2007). The legitimacy problem is related to the

extended influence of WTO and, often, to state sovereignty. The consensual decision-making principle is one of the main subjects in WTO criticisms, being argued that they are made only at formal level and reflect the power relations between member states, in the form of a weighted vote according to major interests. The informal practices, which lead to adopting decisions, involve the emergence of groups with restricted composition that deliberately exclude other countries (Kim, 2009).

Consensual practices in the GATT/WTO has always meant that all parties have to agree upon a specific subject, but in practice this voting system could be a hidden one; reality proves that the share of the voting countries is more important than the one of the smaller countries (Low, 2011).

Much of the criticism results from the perception that trade liberalization have been raised to very high ranks, while other values were slaughtered. A proposed solution to this problem is to slow down or stop the expansion of WTO in areas not covered by trade with goods. But can WTO include non-trade issues within its agenda? WTO is the precursor of GATT and therefore is quite less equipped to consider other problems; skeptics say that we need another specialized organization to address these issues (Sun, 2011).

The isolationist approach of the WTO, as an independent legal island, ignores the wishes of its members, concludes agreements in their detriment, builds trade rules out of their concern and wishes to correct failures of environmental or social issues more than it can. We cannot speak of coordination and coherence as long as the WTO rules always prevail over other agreements (Pauwelyn, 2005). WTO should not hold a monopoly in international cooperation.

A lot of countries feel excluded or left behind by WTO rules and for the most of poor countries participation in the system remains a distant dream. Trade system has been perceived as a fortress by the outsiders, with discussions being held behind closed doors, the majority of decisions being in favor of strong and powerful producers and exporters; but also by the insiders, which are tied to commitments in "package" and with no way out, because of the economic realities or because of a strict implementation mechanism. Hence results the lack of legitimacy, poor support and lack of loyalty to the values that underline the system (Sutherland and al, 2004). WTO critics relate easily to the existing democratic deficit within the organization (Elsig, 2007). Unlike the early years of the GATT, the lack of organization's legitimacy is no longer offset by the progress towards trade liberalization. Cooperation under GATT in an anarchic era seemed easier than the one today, taking place in an environment governed by rules and procedures. WTO has fundamentally changed the nature, purpose and structure of the multilateral trading system. It became the target of lobby groups and civil society, which led to excessive politicization of the organization (Mercurio, 2007). Critics say that the big number of members doesn't allow the organization to reach consensus or to effectively address the problems in the 21<sup>st</sup> century, which leads to blockages and disagreements within negotiations (Sun, 2011).

### **3. The Failure of the Doha Round**

Trade liberalization was not an easy thing to be achieved over eight rounds of multilateral trade negotiations, but it has changed the world trade. It offered a bulwark against the evident protectionism of developing world, but also stability and growth, which led to avoiding trade conflicts (Sutherland, 2011). The disintegration of trade

negotiations and the continuous inability of the WTO to reach an agreement are worrying (Mercurio, 2007). The failure of the Doha Round is based on the misunderstandings among states and on the refusal to compromise.

But how did we get here? Two arguments are brought forward: ten years of negotiations have made some progress, but because of the blockages, the current negotiations will not be concluded in the next period; no government wants to announce publicly that it waives the negotiations (Baldwin and Evenett, 2011). This impasse would occur due to not achieving consensus on tariffs and market access in sensitive sectors, as a result of direct disapproval of the United States, China and India in July 2008 (Kim, 2009).

WTO has shown its importance in expanding trade opportunities and by creating a dispute settlement mechanism that imposes obligations and solves trade disputes among countries. It has brought tangible benefits to many developing countries, supporters say, and it was expected that the completion of Doha Round would provide substantial benefits and assistance for most of the least developed countries (Sun, 2011). But the emergent countries have adopted offensive positions because of their own interpretation of regulations to serve their interests. They have demanded negotiations on equal footing, claiming common approaches to global problems, but maintaining their status of developing countries.

Brazil, China, India and South Africa (G20) have asked free market access in developed countries, while having same resistance on their own market access. Japan, Switzerland and Norway (G10) maintained the negative attitude and the defensive approach in the negotiations regarding agriculture due to their lack of competitiveness at international level. Low income countries (G33), net food importers, focused on the following issues: special treatment, access to developed markets for agricultural products, reducing preferences (Mercurio, 2007).

A significant number of contributors have suggested that further negotiations should provide the necessary impetus by launching an effective program of work rather than continuing the process of negotiating on how WTO could address the problems of the 21<sup>st</sup> century, some of them already exceeding the initial Doha agenda from 2001. They have considered two ways: the first one considers the institutional reform of the WTO; the second one considers new issues, like the increased trade, investments and services convergence and the establishment of acceptable limits of national climate policies with trade implication (Baldwin and Evenett, 2011).

There are also intensely analyzes of the costs of Doha Round stalemate (Pangestu, 2011), the biggest one being related to food crisis and security. During the 2008 food crisis, the imbalances between supply and demand were attributed in part to distorted prices prevailed in agriculture, resulting in export subsidies and domestic support system. Removing these distortions can occur only if decisions are made at regional and bilateral level rather than at multilateral level.

Second of all, there are analyzes of the protectionism costs. Throughout the crisis, a moderate form of protectionism arose at the global level, which allowed the recovery of trade exchanges. The most used trade barriers were increased custom duties, licensing and export restrictions. Developing countries, such as Indonesia, are interested in reducing protectionism, given the assumption that multilateral trade system is fair for everyone.

Third of all, the lack of progress of the Doha Round remains a pressure on trade negotiations at bilateral and regional level. In the South-East Asia there are already regional agreements between ASEAN members and the six key partners (Australia,

China, India, Japan, South Korea and New Zealand), as well as bilateral free trade agreements. EU has bilateral agreements with South Korea, India and ongoing ones with Singapore, Malaysia and other ASEAN countries.

Fourth of all, there is an inhibitory effect in addressing unilateral reforms by the WTO members. The economic policy of trade liberalization and the institutional reforms have always worked better than international commitments have had. The multilateral rules and regulations have always imposed limits in states' decisions, being accepted only the beneficial ones.

Most analysts agree that negotiations should be continued and reaching compromises to achieve both new market access and market reforms (Schwab, 2011). One thing is clear: the basic structure of Doha Round is a combination of self-selected flexibility that hasn't work and won't work. It has led to the situation in which each part has to assume political costs of its own decisions, while waiting for the other parts to disagree with market access. Another element to be considered is the division of states into three basic categories (developed, developing and least developed), a practice that no longer fits the realities of the 21<sup>st</sup> century and provides no real progress in the negotiations. Developed countries will always have more to do than those in other stages of development, but expectations should reflect the fact that many emerging economies are shaped by poverty, even if they are globally competitive powers.

The adverse implications of a continued stalemate of Doha Round in the future of WTO are too convincing to be rejected (Bhatia, 2011). Global problems require international cooperation. Food security and energy, trade related aspects, labor mobility, price volatility, trade liberalization and integration are current issues on global agenda of any international negotiations. There are many analysts who believe that the WTO structure can withstand the failure of the Doha Round, but it should not be underestimated the changes that have taken place with the rules established in 1994 and based on the initial agenda of negotiations under GATT.

To announce that Doha Round has failed is a simple one, but what happens after? Will this strengthen the multilateral trading system? If WTO stands, this takes only to the new rules negotiated by its members. However, the failures registered in the last 10 years will not be deleted as soon as a new round starts. Another option would be giving up the previous negotiations in Doha Round and all WTO members agree upon the final package of rules and norms. This would allow the commissions to continue their activity, with new norms instead of old ones. But after 60 years of customary practices, will someone agree with common practices?

However, the failure of the G20 in strengthening the multilateral trade system by concluding Doha Round is a major cause of the lack of credibility. If developed countries will experience further slow economic growth, the effect is to introduce protectionist measures, even if WTO has imposed limits. The problem is that the excessive non-tariff measures applied over the existing tariff rules leaves room for interpretation in terms of protectionism.

But the current international political environment is not conducive for achieving consensus and complete multilateral trade talks. The economists argue that if there will be no impact on globalization, the Doha Round will not end (Frieden et al, 2012). If, however, the current problems leave room for trade talks, the Doha Round can be completed, leaving room for WTO to address other issues that are already a challenge for the multilateral trade system.

#### **4. Proposals for WTO Reform**

Those who support the reform of global economic governance go on equity and social justice, but also on economic justice through extending social problems at global level. The reform implies a radical revision of the normative foundations of global governance and calls for such arrangements in the global economy and international organizations (Kim, 2009). Global governance can be inconsistent with the criticism raised by WTO opponents (Guzman, 2004). What is clear is the fact that international cooperation provides an effective strategy to address the concerns of WTO reform.

For more than a decade, the WTO faces an existential crisis, continued by the unsuccessful conclusions of the Doha Round. Baldwin said that there are assumptions on the fact that the organization is on the brink (Baldwin, 2006). The raising number of regional agreements and informal institutions lead to the expansion of preferential agreements, increasing the protectionist sentiment in overcoming inefficiency about WTO decisions in its legitimacy crisis and the effectiveness of its objectives (McGrew, 2011).

In terms of decision-making process, most reform proposals relate to improving the WTO efficiency (Ziegler and Bonzon, 2007). Some researchers have proposed giving up consensual decisions and replacing it with the weighted voting system (Cottier and Takenoshita, 2003). Other suggests a fine adjustment to the consensus (Jackson, 2001). There are times when efficiency and legitimacy can collide; when raising efficiency implies formal moving from consensus to effective decision-making, the impact is negative for legitimacy in terms of the equality of sovereign states (Jackson, 2001). WTO reform has been analyzed extensively by researchers, and modifying the geometry of global economic order after shaking the concept of globalization have led to deepening of the existential crisis of WTO and to the need of shaping a new global economic governance. The financial crisis has created the opportunity to rethink the global order and its immediate recovery (Gamble, 2009).

Is there the possibility that the crisis of WTO exist for over a decade? The current economic environment contributes to the fact that WTO has entered into a decisive phase of its institutional development. The crisis of multilateralism was one of the decisive factors in shaping consensus on WTO existential crisis (Henderson, 2002). Both supporters and critics of WTO seem to share the view that multilateral economic governance and the consensual decision-making process are dysfunctional and ineffective; the decisions in deepening trade liberalization have been significantly reduced, dispute settlement mechanism is overestimated and the initial objectives are controversial. There are brought arguments in the direction of institutional reform and its consequences on WTO and its members, but the key question remains related to which direction should start the process (Kim, 2009).

In the context of WTO reform, the researchers do not aspire to the idea of a world government, but they plead for the transfer of sovereignty from to the national level to supranational level. They argue that the legitimacy will increase only by lowering the governance levels, and a great obstacle for legitimacy is the inadequate external accountability (Elsig, 2007). But the actual consensual decision-making process does not promote legitimacy. This can be improved by formalizing the practices in consensual decision-making and increase its transparency. There are proposals related to WTO activities through power distribution to smaller decision bodies, which

leads to a decreasing in legitimacy because they are underrepresented institutionally (Ziegler and Bonzon, 2007).

The WTO crisis is supported by the inconsistency of reform programs, with technocratic proposals of Sutherland and Warwick Commissions or with other radical ones. Here we face a paradox in the sense that the speeches on crisis have made possible the WTO reform and also offered the development of coalitions who oppose to the institutional reform agenda.

In 2004, WTO published Sutherland Report, with a comprehensive assessment of institutional failures faced by the organization in the early 21<sup>st</sup> century and offers a multitude of reforms, aimed mainly to improve institutional efficiency (Sutherland et al, 2004). The problems underlined in the report, the proposed solutions and how the report was drafted was considered a missed opportunity for WTO reform. The defensive position of the multilateral trading system has been in favor of supporting the WTO and has brought allegations which extended criticism (Pauwelyn, 2005).

The Sutherland Report has taken into account the coordination between WTO activity and other intergovernmental organizations, but it takes more than several international rules to avoid the failures of international market. It addresses the challenges of WTO dually, making a distinction between WTO policy and the regulatory and dispute settlement mechanism.

While detailed proposals have been offered and have covered most WTO operational areas, the Report focused more on the institutional design and on improving the negotiations and decision-making process. The Report has reflected many of current concerns about the crisis of multilateralism and has made several recommendations for continuing the nondiscriminatory principles in a variable geometry for decision-making process, in which smaller specialized groups replace the current negotiation mechanism (Wagner and Von Bogdandy, 2005).

Many critics of this Report have examined the proposals in comparison with their philosophical views about WTO reform. The Report has been being criticized for being narrow in approach and not providing an overview of international politics (Elsig, 2007).

In December 2007 it was launched the Report of Warwick Commission that analyzes how international trading system can effectively serve the global community (Warwick Commission, 2007). It have taken into account the changes of global economy in association with the emergence of new economic powers, with their growing aspirations, but also social and societal issues, that require the rethinking of the principles and practices that guide the multilateral trading system.

The findings of this Report have been optimistic and provided solutions for most of WTO issues.

The economic and financial crisis has led to numerous proposals of reform and criticism to the WTO activities. World Economic Forum has come in 2010 with proposals to WTO reform, stressing the importance of subsidiarity in decision-making process in order to minimize national autonomy. The proposed approach has been the one of "*club of clubs*" of countries to more effectively address current challenges. It is claimed supporting a program which completes all future agreements as being defined in the Uruguay Round, with additional commitments for only a part of the members willing to do it. But how is this possible?

The economists argue that WTO already works this way because it allows the existence of several plurilateral agreements under its aegis. The best example is the Agreement of Government Procurement established in Tokyo Round which provides

useful guidance for how these clubs should work. This approach leads to rules with much lower impact than those established at the multilateral level (Frieden et al, 2012). But this is not necessarily bad. Members are encouraged to join small clubs with fewer risks. This would call into effect the principle of reciprocity, fundamental in the dispute settlement mechanism. Because they represent independent agreements, these clubs will be willing to make concessions in order to have more members and WTO members will not feel that joining one club or another means the loss of currently benefits they enjoy under the WTO agreements.

There are also outlined the benefits of this reform proposal. Trade issues would be addressed on a much larger scale, as well as the rest of the topics directly related to those remained suspended in the latest round of multilateral negotiations. Members, who wish the deepening integration under the WTO, can do it successfully, not being required to consider that this thing would serve their own interests. These elements would strengthen the legitimacy of WTO and the interested ones can implement an agenda for deepening integration processes (Baldwin, 2012).

The approach "*club of clubs*" creates and concerns WTO critics. The first concern is related to that fact that WTO would be faced with two classes of countries, some of them belonging to a group, some of them not. Supporters say the division won't be so sharp, especially because there are already differences between states in terms of obligations. A second concern is that a small number of states will establish a specific pattern of their club, which is going to restrict the access of new members. The fact that Uruguay Round led members to accept and implement the agreements in Tokyo Round has been seen as a worrying precedent. But supporters believe that these clubs will become an intrinsic part of WTO and all members are going to be able to accept and implement further obligations (McGrew, 2011).

A third concern is that this approach could limit the ability of members to obtain agreements in their own interests. Supporters say that members will agree to assume certain obligations not just because they are beneficial, but also to sell them to get more in return. On long term, both sides will have benefits and, even there are fewer universal rules, the implemented ones will be supported by stakeholders. A final concern relates to the fact that the organization would greatly expand. Critics say that a major failure is to extend the Doha Round and that other issues than trade are better managed by OECD or IMF (Zürn, 2004).

WTO reform depends on the interest of the large global players, in essence the members of G20. Assuming that the main ingredients are complemented by basic WTO commitments, the approach "*club of clubs*" might contribute to a deeper global integration and alleviate the existing institutional tensions when it comes to WTO. It gives a compromise in which diversity can coexist with expanding commitments of member countries. Clubs might prove to be a support in promoting the central targets: lowering trade barriers, reducing discrimination based on domestic policies, strengthen the economic development through trade. This would enhance WTO legitimacy and ensure better alignment of targets and objectives, means and effectiveness of the international organization.

WTO centrality in global trade governance has eroded and continues in this matter, but multilateralism will continue to lead the international trade. But in terms of the most dynamic segment of international trade (supply chain), the debate is fragmented and even exclusionary (Baldwin, 2012). Without a conclusion to the Doha Round negotiations, WTO members have a significant stake in approaching this issue, which becomes more and more regionalized. The governance gap in this

area is partly covered with bilateral trade agreements, especially between United States, European Union and Japan, but also autonomous reforms applied by emerging countries, which means that WTO has no role in the emergence of norms and rules that are established regionally.

In terms of traditional trade, WTO is still the supreme authority. But the appearance of strong emerging countries and regional guidance of trade has already changed the governance of international trade. East Asia countries have launched their own initiatives, a trend that increases the fragmentation within the multilateral trading system. The economists say it is almost impossible to bring regional rules on global supply chain (Baldwin, 2012). And even if China and other BRICS countries will want to bring these discussions at the multilateral level, rules have to be negotiated under the umbrella of a multilateral institution; for this reason, WTO seems to be the best candidate just on the light of the fact that developed countries will want equal treatment regarding exporters, without preferential treatment for emerging countries. Eliminating preferential treatment is an essential part of the governance process of supply chains. But many WTO members are not involved in the global supply chain, which means that it will be very difficult to reach consensus at the multilateral level; only QUAD members (United States, European Union, Japan and Canada) have to reach consensus with emerging countries. Baldwin suggests the coexistence of two organizations in global trade governance:

**Table 1: WTO 1.0 versus WTO 2.0**

WTO 1.0	WTO 2.0
<ul style="list-style-type: none"> <li>• traditional organization</li> <li>• elimination of trade barriers</li> <li>• multilateral norms and rules</li> <li>• cover issues related to international trade and liberalization of goods</li> <li>• unlimited number of members</li> <li>• membership is a must</li> <li>• prisoner's dilemma</li> <li>• preferential treatments</li> <li>• win-win cooperation</li> <li>• existence of exemptions and special cases</li> <li>• problem with coordination</li> </ul>	<ul style="list-style-type: none"> <li>• new organization</li> <li>• providing global supply chain</li> <li>• bilateral and regional norms and rules</li> <li>• cover other issues on the agenda of multilateral trade negotiations</li> <li>• reduced number of members</li> <li>• membership is a luxury</li> <li>• resistance dilemma</li> <li>• without preferential treatments</li> <li>• win-lose cooperation</li> <li>• strict discipline in trade</li> <li>• coordination is a must</li> </ul>

Source: Baldwin, 2012

## 5. Conclusions

The approach taken in this article represents a marked point of departure from much of the modern economic literature regarding WTO. In the latest 20 years, the economists sought to develop theoretical rationales for the WTO, and multilateral agreements have been really important in shaping trade relationships. However, the Doha Round has not been yet finished accordingly. There is a great need of research to understand why impasses can arise after a negotiation has begun with such high hopes. Further research is necessary for finding the best approach in terms of reforming the multilateral trade. WTO has to stay on track in the 21<sup>st</sup> century or to engage constructively in a new range of disciplines necessary to underpin 21<sup>st</sup> century trade.

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## **A CROSS-COUNTRY ANALYSIS OF THE BANKS' FINANCIAL SOUNDNESS: THE CASE OF THE CEE-3 COUNTRIES**

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*Abstract:* The European integration process has a direct impact on all the components of the macroeconomic environment. The existence of a well functioning and sound banking sector becomes of great importance for the integration process as the European Union economy is financed especially through this channel. The banking sectors of the new EU member countries have undergone through tremendous changes in the last decade, both from an ownership and also from a business strategy point of view, these changes having a direct impact on their financial soundness. Thus, the aim of our research is to empirically examine the financial soundness of the banks operating in Bulgaria, Czech Republic and Romania, three EU members countries from Central and Eastern Europe (CEE-3). In order to achieve this we have employed a combine quantitative analysis based on the CAMELS framework (namely Capital Adequacy, Asset quality, Management soundness, Earnings, Liquidity, Sensitivity to market risk) and the Z-score, thus being able to underline simultaneously the financial soundness and the possibility of default for the banks from our sample. The analysed period is 2004-2011 providing us with an evaluation of the impact that the EU ascension and also the global financial crisis had on the financial soundness of the analysed banks. Our sample is composed from 40 commercial banks that operate in Bulgaria, the Czech Republic and Romania, that overall own over 75% of the total banking assets, making this study one of the most comprehensive undertaken to this date. The data that we have employed in our research is obtained from the Bureau Van Dijk Bankscope database and the annual financial statements of the banks from our sample. The paper through its original dual approach contributes to the academic debate by providing not only insight into the financial soundness of the banks operating in the CEE-3 countries but also underling their financial strength through the usage of the Z-score. Thus, the topic of the paper is focused on a subject of great importance for the European integration process.

*Keywords:* integration, financial soundness, CAMELS framework, Z score

*JEL classification:* G01; G21; O52

### **1. Introduction**

The recent global crisis, through its severe implications on the financial systems and the real economy, underlines the major importance that the evaluation of banking sector soundness has for the identification of the weak points and the vulnerable banks, being known that if the problems are identified late the solutions for solving

them are more costly and the risk that the vulnerabilities will spread in the whole banking system are greater.

To assess the soundness and stability of the banking system a wide range of tools is used, among which stands out especially the analysis of a set of quantitative indicators conceived by the IMF and World Bank (IMF and World Bank, 2005). In order to ensure the comparability of data at an international level, the IMF published in March 2006 a *Compilation Guide on Financial Soundness Indicators*. According to this publication, given the complex nature of the financial system and the interconnections between the financial system and the real economy, financial soundness indicators are divided into two groups, namely the first group (entitled the core set) composed of the main indicators of the banking sector, at which references our paper as well, and the second group (entitled encouraged set) composed of other indicators of the banking sector and also of a series of non-banking sector indicators.

The core financial soundness indicators refer to six key areas of banking activity resulting from the CAMELS framework (namely *Capital Adequacy, Asset quality, Management soundness, Earnings, Liquidity, Sensitivity to market risk*), considered one of the most popular methods of analysis and assessment of the financial soundness of banks.

The major importance that the assessment and analysis of the banking sector soundness has led central banks from a series of countries (like the Central Bank of the Turkey, The Swiss National Bank, Netherlands Central Bank, Czech National Bank) to intensify their concerns regarding the creation of an aggregate indicator of the soundness of the banking sector, based on the consideration that the banks are the most important component of the financial system in terms of financial stability (Geršl and Heřmánek, 2006).

In this context, the aim of our research is to examine the financial soundness of the banks operating in Bulgaria, Czech Republic and Romania, three EU members countries from Central and Eastern Europe (CEE-3). In order to achieve this we have employed a combine analysis based on the CAMELS framework and the Z-score thus being able to underline simultaneously the financial soundness and the possibility of default for the banks from our sample. The analysed period is 2004-2011 providing us with an overview of the impact that the EU ascension and the global crisis had on the stability of the analysed banks.

Our research is structured as follows: the second part provides a review of the academic literature on this theme, the third part presents the data and methodology used, the fourth part is dedicated to the analysis and discussion of the selected banks soundness and the fifth part contains the concluding remarks.

## 2. Literature review

The existence of a strong, solid and stable banking sector represents an extremely important element for all participants to the economic environment either depositors, investors or entrepreneurs especially in the case of the new EU member countries, in which case the economy is financed overwhelmingly through this channel. Taking these into account, the subject of the financial soundness and performances of the banking system has become, especially in the last period of time, the focus point of both public authorities and scholars.

One of the most used models for the estimation of a bank performance and financial soundness has been in the last years represented by the CAMELS framework (Baral, 2005). In practice this system has been used by the regulatory authorities as a bank supervision instrument (Gilbert et al, 2000; Hays et al, 2009) and also as a model for the evaluation of the performances registered by a banking institution (Derviz et Podpiera, 2008; Atikoğulları, 2009; Mishra et al., 2012). The popularity and robustness of this method is also underlined by the inclusion in the handbook for the evaluation of the IMF members banking sector financial soundness of the CAMELS framework (Sundararajan et al, 2002).

Also in the academic literature the CAMELS framework has been employed in order to estimate the soundness of various banking systems. Thus, Godlewski (2005) tests the validity of the CAMELS framework for banks defaults models in emerging markets. The results confirm that the indicators for bank solvability, assets quality, liquidity, management quality and profitability have a negative impact on the probability of banks default. Brossard et al. (2007) estimate an early warning model for banks failure using the CAMELS framework for a panel of 82 EU banks for the period 1991-2005. The obtained results underline that a measure of past average growth of assets can be a very good predictor for future possible banks difficulties. Wang (2012) explores the relationship between the operating performance and corporate governance of bank holding companies in the United States of America. The results underline the positive link between corporate governance and the improvement of the financial soundness indicators from the CAMELS framework.

In recent years another indicator, namely the Z-score, has become a rather popular indicator for the underling of the financial soundness for banking institutions in various researches (Hesse et Čihák, 2007; Beck et al., 2012; Borgioli, 2013). The main reason for this evolution is that the Z-score enables an easy and direct way to interpret the financial soundness of a banking institution, underling the ability of a bank to face risk with the capital and profit buffers that the banking institution has. The research of Stiroh (2004) assesses potential diversification benefits for the US banks that have steadily increased their reliance to non-traditional business activities. The results imply that the move toward noninterest income is actually worsening the risk/return trade-off measured with the help of the Z score for the typical bank, as volatility increases while average returns decrease. Mercieca et al. (2007) investigate whether the observed shift into non-interest income activities improves the performance of small European banking institutions, employing for this a sample of 755 small banks over the period 1997–2003. The negative correlation between the Z score and the diversification of the small banking institutions underline that European small banks are entering market niches on which they have no expertise and implicitly the risks tend to increase rather than decrease.

Despite all these, the number of studies focused on the new EU member countries that employ the CAMELS framework or the Z score, or both methods, in order to underline the financial soundness of the banking institutions that operate in these countries is rather small (e.g. Ivičić, 2008; Albuлесcu et Coroiu, 2009; Dardac et Moinescu, 2009). Thus, our research intends to fill this gap by providing an analysis of the financial soundness for the Bulgarian, Czech Republic and Romanian banking sector in the EU ascension and financial crisis period, employing a dual approach based on the CAMELS framework and the Z score.

### 3. Data and methodology

Our sample is composed from 40 commercial banks, 11 from Bulgaria (owning 69,95% of total assets), 14 from the Czech Republic (owning 85,58% of total assets) and 15 from Romania (owning 78.10% of total assets). The data that we have employed in our research is obtained from the Bureau Van Dijk Bankscope database and the annual financial statements of the banks from our sample.

We have calculated the average individually for each of the indicators and parameters of the CAMELS framework for the period 2004-2011 (see table 1). The obtained results have been used to rank the banks, rank one being attributed to the best performing banking institution the rest of the banks being ranked accordingly, using a step of one. In the case in which we have obtained the same average for two banks we have attributed to those banks the average of their ranks. Averaging the ranked obtained for the different components of the CAMELS framework we have estimated the financial soundness of the commercial banks from our sample.

In order to estimate the *capital adequacy* of the banks from our sample we have employed two indicators. The first is the *total capital ratio* that reflects the ability of a bank to meet the time liabilities and other risks such as credit risks or operational risks. Generally there is a statutory level for the banks regarding this indicator, currently being at 10% for the banks operating in Romania, 8% in the case of the Czech Republic and 12% for the banks operating in Bulgaria. The highest rank is attributed to the bank that has registered the highest score for this indicator. The second indicator used is represented by the *ratio of the equity to total assets*. This indicator measures the proportion of the total assets that are financed by the shareholders of the banks, implicitly the highest rank being attributed to the bank that has registered the highest level for this indicator.

For the *assets quality* we have used three indicators, namely the *loan loss provisions to net interest revenues* ratio, the *impaired loans to gross loans* ratio and the *total loans to total assets* ratio. The *loan loss provisions to net interest revenues* underlines the ability of a bank to cover the expenses with the provisions for impaired loans from the interest that it collects, thus the lower the value of this indicator the higher the rank. The *impaired loans to gross loans* ratio underlines the ability of a bank to grant loans to prime clients that will repay their debts. Thus, the lower this ratio the better the quality of the loans portfolio and the banks will reach a higher rank. The ratio of *total loans to total assets* underlines how diversified is the activity that a banking institution undertakes. Despite being an important part of the total assets, if their ratio to total assets is high this exposes the bank to loans losses, thus the lower the value for this indicator the higher the ranked attributed.

In order to assess the *management quality* of the analysed banks we have used two indicators, namely the *operating expenses to total assets* and the *interest expenses to deposits*. The *operating expenses to total assets* ratio underlines the ability of the management to operate the daily activities of the banks at a lower cost, implicitly the bank with the lowest level of this indicator being ranked first. The interest expenses to deposits emphasis the ability of a bank to attract deposits at a low cost, thus the highest rank is attributed to the bank with the lowest score.

The earnings abilities of the banks from our sample are underlined by three indicators: the *cost to income ratio*, *ROA* and *ROE*. The cost to income ratio is obtained by dividing the operational costs to operational incomes and underlines how efficiently the bank is being run, implicitly the lower this ratio the more profitable the bank will be. Return on Assets (ROA) and Return on Equity (ROE) underline how

profitable are the bank assets / equity in generating revenues. Thus, the higher these indicators, the higher that bank will be placed in our rankings.

The *liquidity* of the banking institutions from our sample is underlined by their *liquid assets to deposits* ratio and the *net loans to deposits* ratio. The *liquid assets to deposits* ratio underlines the ability of a bank to withstand a possible bank-run, the higher this indicator the more secure that banking institution is, thus the highest rank is attributed to the bank with the highest score for this indicator. *Net loans to deposits* ratio underlines the ability of a bank to fund its activity from the attracted deposits. If this indicator is above 1 that the bank is close to become insolvent, thus the lower the score obtained the higher the rank achieved.

In order to underline the *size of the assets* that a bank has we have calculated the ratio of its *assets to the total assets of the banking sector*. Thus, the higher this ratio the more important is the bank for that given banking sector and the higher the rank achieved.

Alongside the CAMELS framework we have employed also the *Z-score* in our research, which determines the distance to insolvency for a bank (Roy, 1952) and is computed using the formula:

$$Z - \text{score} = \frac{\text{ROA} + (E/A)}{\sigma(\text{ROA})} \quad (1)$$

where ROA represents the return on assets, E/A is the ratio of total equity to total assets and  $\sigma$ ROA is the standard deviation of the return on assets. We have used as the denominator the standard deviation of the return on assets as we did not wanted to allow the Z-score to be exclusively driven by the variation of the capitals or the profitability. The Z-score can be interpreted as the number of standard deviation by which the returns on assets must fall from the mean in order to consume all the equity that a bank has and implicitly produce its bankruptcy (Boyd and Runkle, 1993). Thus, the higher the Z-score, the less that banking institution is likely to go bankrupt.

**Table 1: Summary statistics for the banks data used in our research for the period 2004-2011**

Indicators	Bulgaria		Czech Rep.		Romania	
	Avg.	St. dev.	Avg.	St. dev.	Avg.	St. dev.
<b>C</b> Total Capital Ratio	18.24	11.28	23.12	19.44	18.09	6.61
Equity / Total Assets	14.01	9.78	11.60	9.82	10.94	1.39
Impaired Loans / Gross Loans	4.30	2.22	4.42	3.09	7.42	3.83
<b>A</b> Loan Loss Prov/ Net Inter. Rev.	21.37	9.87	17.22	11.11	33.31	23.89
Total loans / total assets	64.41	9.87	54.19	15.77	56.22	8.33
Op. expenses / Total Assets	3.28	1.16	1.82	1.35	5.39	1.79
<b>M</b> Interest expenses / Deposits	4.46	3.94	3.51	3.37	6.25	1.86
ROAA	1.78	0.62	1.08	1.09	0.77	1.29
<b>E</b> ROAE	14.93	4.71	14.25	8.73	4.47	22.66
Cost to Income Ratio	52.72	13.11	52.15	32.14	69.59	14.84
<b>L</b> Liquid Assets / Dep & ST Fund.	58.42	93.66	44.32	37.96	36.60	4.15
Net loans / Dep & ST Funding	141.97	182.23	110.9	128.28	71.43	15.07
<b>S</b> Tot. Assets / Total sector assets	6.02	4.80	6.53	8.25	5.52	6.38

Source: Authors calculations based on Bureau Van Dijk Bankscope database (<https://bankscope2.bvdep.com>)

The banks operating in the Czech Republic are registering the best performances

in the case of the *capital adequacy* indicator, this being attributed to the more stricter approach that has been imposed by the national regulatory authorities in the aftermath 1999 banking crisis. The banks operating in Romania and Bulgaria are registering similar performances, that are however well above the minimal requirements imposed in these countries for banks capital adequacy ratios.

In the case of the *assets quality* indicators we can observe again that the Czech Republic banks have registered the best performances. By contrast, the Romanian banks have registered the highest impaired loans to gross loans ratio and loan loss provisions to net interest revenues ratio as a result of the high deterioration of the Romanian macroeconomic environment that took place once the financial global crisis has started. It is worth mentioning also that the Bulgarian banks are registering the highest ratio of total loans to total assets, making them extremely vulnerable to the evolution of the non-performing loans.

The *management quality* indicators provide an overview of the superior capabilities of the Czech banks to organise their daily operations in an efficient and impactful manner. The banks operating in Romania are registering the lowest performances, mainly because of the late privatisation of the largest bank in the system, Banca Comercială Română, in 2006. Another reason for the poor performance is represented by the high level of interest to deposits that the Romanian banks had to pay, especially in the aftermath of the global financial crisis in order to be able to attract sufficient liquidity from the market and thus comply with the new prudential requirements imposed by the National Bank.

The indicators for *earnings and profitability* underline the advantage that exists for the banks operating in Bulgaria that have to pay an income tax of only 10%. Also, the cost to income ratio underlines the ability of the Czech banks to operate at a lower cost than their Bulgarian and Romanian peers, especially taking into account the high income tax of 15% that they must pay.

The *liquidity* indicators suggest a split situation between the banks operating in the three countries. Thus, on the one hand the Bulgarian banks are the most liquid ones, while the banks from Romania are registering the lowest value for the ratio of net loans to deposits and short term funding, this underling the ability of these banks to completely cover their granted loans from the deposits attracted, making them the less probable to default in the case of a bank run.

In the case of the *size of the assets* indicator, the results registered in the case of the bank operating in the Czech Republic underline the high level of concentration that this banking sector has. The high standard deviation also points out to the high discrepancy that exists between the larger banks and the smaller one. A similar situation is registered also in the case of the Bulgarian and Romania.

#### **4. Empirical results**

The obtained results in the case of the banks operating in Bulgaria for the CAMELS framework are displayed in table 2. In this case the top five ranked banks are UniCredit Bulbank, Raiffeisenbank, DSK Bank, Corporate Commercial Bank and United Bulgaria Bank. We must underline that the biggest bank in Bulgaria, UniCredit Bulbank, has managed not only to be ranked first in the CAMELS framework but also has obtained the best ranked for the management quality. On the other hand the lowest five ranked banks are: Allianz Bank Bulgaria, Societe General Expressbank, First Investment Bank, MKB Unionbank and Procredit Bank. Allianz Bank Bulgaria,

MKB Unionbank and Procredit Bank are also the smallest banks from our sample in the case of Bulgaria.

**Table 2: Ranking of the Bulgarian banks based on the CAMELS framework**

	<b>C</b>	<b>A</b>	<b>M</b>	<b>E</b>	<b>L</b>	<b>S</b>	<b>Avg.</b>	<b>Rank</b>
<b>Allianz Bank Bulgaria</b>	10.5	2	6	8	2	8	6.08	<b>7</b>
<b>Bulgarian Develop. Bank</b>	1	7	6	5.5	5	11	5.92	<b>6</b>
<b>Corporate Commercial Bank</b>	10.5	1	6	5.5	1	7	5.17	<b>4</b>
<b>DSK Bank</b>	3	10	4	1	10	2	5.00	<b>3</b>
<b>First Investment Bank</b>	9	3	10	11	8.5	5	7.75	<b>9.50</b>
<b>MKB Unionbank</b>	7.5	8	9	9.5	3.5	9	7.75	<b>9.50</b>
<b>Procredit Bank</b>	6	6	11	9.5	11	10	8.92	<b>11</b>
<b>Raiffeisenbank</b>	4.5	9	2	4	6	4	4.92	<b>2</b>
<b>Societe General Expressbank</b>	7.5	4	8	7	7	6	6.58	<b>8</b>
<b>UniCredit Bulbank</b>	2	5	1	2	3.5	1	2.42	<b>1</b>
<b>United Bulgaria Bank</b>	4.5	11	3	3	8.5	3	5.50	<b>5</b>

*Source: Authors calculations*

For the banks operating in the Czech Republic the results for the CAMELS analysis are presented in table 3. We can observe that the best results have been achieved by: Stavební Sporitelna České Sporitelny, Ceskoslovenska Obchodni Banka, Komerčni Banka, PPF banka and Ceska Sporitelna. It is worth mentioning that the biggest three banks by assets, namely: Stavební Sporitelna České Sporitelny, Ceskoslovenska Obchodni Banka and Ceska Sporitelna are also in the top five ranked banks. By contrast, the lowest four ranked banks are: GE Money Bank, Czech Export Bank, Equa Bank and Modra Pyramida Stavebni Sporitelna. Also in this case, except GE Money Bank, the lowest rank has been obtained by some of the smallest banks from our Czech Republic sample.

**Table 3: Ranking of the Czech banks based on the CAMELS framework**

	<b>C</b>	<b>A</b>	<b>M</b>	<b>E</b>	<b>L</b>	<b>S</b>	<b>Avg.</b>	<b>Rank</b>
<b>Ceska Sporitelna</b>	11.5	6.5	5.5	4.5	10	2	6.67	<b>5</b>
<b>Ceskomoravska Stavebni</b>	13	4	5.5	7	13	5	7.92	<b>8.50</b>
<b>Ceskomoravska Zarucni a Rozvojova</b>	5.5	11	9.5	4.5	6.5	10	7.83	<b>7</b>
<b>Ceskoslovenska Obchodni</b>	11.5	2	4	8.5	2.5	1	4.92	<b>2</b>
<b>Czech Export Bank</b>	4	12	7.5	13	6.5	11	9.00	<b>11</b>
<b>Equa Bank</b>	1	8	13.5	14	4.5	14	9.17	<b>12.5</b>
<b>GE Money Bank</b>	3	14	7.5	6	14	7	8.58	<b>10</b>
<b>Hypotecni banka</b>	2	6.5	11	8.5	11	6	7.50	<b>6</b>
<b>J&amp;T Banka</b>	7.5	13	13.5	12	8.5	13	11.25	<b>14</b>
<b>Komerčni Banka</b>	5.5	5	12	2.5	2.5	3	5.08	<b>3</b>
<b>Modra pyramida stavebni</b>	14	3	9.5	11	8.5	9	9.17	<b>12.5</b>
<b>PPF banka</b>	7.5	9	2.5	2.5	1	12	5.75	<b>4</b>
<b>Stavební Sporitelna České Sporitelny</b>	10	1	1	1	4.5	8	4.25	<b>1</b>
<b>Unicredit Bank Czech</b>	9	10	2.5	10	12	4	7.92	<b>8.50</b>

Source: Authors calculations

Table 4 displays the results obtained in the case of Romanian banks for the CAMELS framework. The top five banks ranked are: **RBS Bank, Raiffeisen Bank România, CEC Bank, Banca Comercială Română and UniCredit Țiriac**. In the case of RBS bank we must underline that, despite being a small bank, it has obtained the best ranking also in the case of assets quality, management quality and liquidity. The bottom five ranked banks are Piraeus Bank, Banca Comercială Carpatica, MKB Romexterra and ProCredit Bank, that are the smallest banks from our sample in the case of Romania.

Table 4: Ranking of the Romanian banks based on the CAMELS framework

	C	A	M	E	L	S	Avg.	Rank
<b>Alpha Bank</b>	11	10	4	5.5	7.5	7	7.50	<b>8</b>
<b>Banca Carpatica</b>	8.5	12.5	13.5	11.5	3.5	13	10.42	<b>13</b>
<b>Banca Comercială Română</b>	8.5	13	2	2	9.5	1	6.00	<b>4</b>
<b>Banca Românească</b>	4	4	11	10	12.5	10	8.58	<b>9</b>
<b>Banca Transilvania</b>	15	8	10	3.5	12.5	5	9.00	<b>10</b>
<b>Bancpost</b>	6	9	6.5	11.5	3.5	8	7.42	<b>6.50</b>
<b>BRD-GSG</b>	14	12.5	4	1	11	2	7.42	<b>6.50</b>
<b>CEC Bank</b>	5	2	6.5	9	6	6	5.75	<b>3</b>
<b>MKB Romexterra</b>	8.5	14	12	14.5	5	14	11.33	<b>14</b>
<b>OTP Bank Romania</b>	1	6.5	13.5	14.5	7.5	12	9.17	<b>11</b>
<b>Piraeus Bank</b>	2.5	15	8.5	8	14	11	9.83	<b>12</b>
<b>ProCredit Bank</b>	13	3	15	13	15	15	12.33	<b>15</b>
<b>Raiffeisen Bank România</b>	12	5	8.5	3.5	2	3	5.67	<b>2</b>
<b>RBS Bank</b>	2.5	1	1	5.5	1	9	3.33	<b>1</b>
<b>UniCredit Țiriac</b>	8.5	6.5	4	7	9.5	4	6.58	<b>5</b>

Source: Authors calculations

In order to have a better overview of the financial soundness and to underline the probability for bankruptcy for the banks from our sample we have used also the Z-score. Analysing the results displayed in table 5 we can draw two quick conclusions. On the one hand, during the analysed period of time the banks operating in the Czech Republic have registered a slightly higher Z score than their Bulgarian and Romanian peers. The registered differences in the case of the Z score can be attributed to the low standard deviation of the returns on average assets registered by the banks operating in the Czech Republic. This is mainly because at the end of the 1990 the Czech Republic banking sector has undergone through a severe crisis, thus banks reorganising their operations and acquiring assets that produce steady incomes rather than high volatile returns.

Table 5: Z-score average decomposition for the banks from the analysed countries for the period 2004-2011

Country	Bulgaria	Czech Republic	Romania
Z-score	20,04	36,19	12,78
ROAA in %	1,76	1,12	0,77
Equity/Assets (in %)	14,01	11,60	10,94
Standard deviation of ROAA (in %)	0,84	0,42	1,30

**Source: Authors calculations based on Bureau Van Dijk Bankscope database (<https://bankscope2.bvdep.com>)**

Second, we can observe that the highest ROAA is registered in the case of the Bulgarian banks followed by the Czech Republic and Romanian ones. This is in line with the income taxes that exist, namely 10% in Bulgaria, 15% in the Czech Republic and 16% in Romania. Also the Czech banks have benefited from a more steady return on assets thus, registering a higher average compared with the Romanian ones, despite the small difference in the income tax level (1% point).

## **5. Conclusion**

The research undertaken has been focused on a sample of 40 commercial banks that operate in the CEE-3 countries, having an original dual approach and underling both their financial soundness and ability not to go bankrupt, thus the paper implicitly having a high level of added-value.

Pooling together all the obtained results, several conclusions can be drawn. First, in the case of the best ranked bank we can observe that the subsidiaries of large pan-European banking groups, especially Austrian ones like Erste and Raiffeisen, are present in the case of all the analysed countries. This can be attributed to the organisational and management strategy of these groups that are extremely focused on achieving a high level of financial soundness for all their subsidiaries. Second, we can observe that also in the top five ranked banks there are some domestic banks in the case of each CEE-3 countries, this underling that local knowledge and networking can provide these banks with the resources needed in order to have a very stable financial position. Third, we can observe that in the case of the lowest rated banks most of the time these are represented by the smallest banks from the sample for the analysed country. This is happening especially because these banks are involved in universal banking activities and have a high level of cost to customer ratio, while also any negative variation of their assets has a direct negative impact on their financial soundness indicators.

However, overall taking into account the results of the CAMELS framework and also the Z-score results we are able to conclude that the commercial banks operating in CEE-3 countries are registering a stable financial situation, the European integration process having a positive impact on their performances. This conclusion is in line with other studies on this topic from the academic literature (e.g. Ivičić, 2008). Also, in future researches it will be of interest to identify and analyse the factors that influence the evolution of the financial soundness indicators through a multiple regression analysis.

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## ANALYSIS OF LABOUR MARKET IN ROMANIA AND THE EUROPEAN UNION

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**Abstract:** *The paper aims at analysing the labour market, one of the most complex forms of market in economy. The present work forwards a comparative survey regarding the labour market in Romania and in the other European Union member states. The paper starts by highlighting general aspects related to labour market and continues by the presentation of the European Union countries' ranking according to the labour market efficiency, top elaborated on the basis of the World Economic Forum data. Furthermore, the paper analyses labour productiveness, employment rate and unemployment rate both in Romania and in the other countries of the European Union. In the end the authors forward conclusions regarding the possibilities of increasing competitiveness on Romania's labour market.*

**Keywords:** labour market; labour force; productiveness

**JEL classification:** J01, J21, J24

### 1. Theoretical Background

It is known worldwide that human resources are a crucial element in any country's economy, as it is recognised that labour force is a determining pillar of economic growth, an essential element of competitiveness and hence of economic development.

The triad physical capital - human capital - technological progress is essential for the development of any economy.

In this context, human resources represent "the key to increasing a country's global competitiveness and thus to realizing long-term economic success" (**Arcelus and Doran, 2003**).

The concept of human capital started to gain recognisance in the economic literature in 1961, along with the publication, in *The American Economic Review*, of Theodore W. Schultz's article entitled "Investment in Human Capital", where human capital was treated similarly with the physical capital (Schultz, 1961: 1-17).

There are numerous preoccupations in the economic literature related to the comprehension of the role of human capital in economic activity, among which we

must cite the remarkable contributions of R. Mincer, William Petty, Adam Smith, J. S. Mill, Alfred Marshall, Karl Marx etc. (Mirela Minică, 2005: 9-12.)

Among the promoters interested in studying human capital we can also mention Gary S. Becker (1994: 52-64), who defines this concept as “the monetary and non monetary activities influencing future monetary revenues”. These activities include school education, professional training during work, medical expenditure, migration, search for information about prices and revenues.

In this context, *labour market represents one of the most complex forms of market existing in economy, as it represents the economic space where the traded factor is labour*, and, according to Vogel (2003: 349-372), *labour market represents the main arena where the individual living conditions are determined*.

Efficiency and flexibility on labour market are critical for any economy, and consequently the intention is that the population fit for work fills positions and finds jobs so that the most efficient use in economy can be reached. Moreover, human resources should be stimulated in order to yield the best efficiency at the place of work (WEF, 2011:5).

## **2. Comparative survey regarding labour market in Romania and the European Union**

As regards labour market efficiency, *Romania ranks 23<sup>rd</sup> in the top of EU member states* (table 1), whereas *UK and Denmark* are still first and second (however, one year ago, their ranking was the other way around).

In 2012, *UK* improved its situation related to economic competitiveness, first of all grace to the increase of the labour market efficiency.

In this respect, in *UK* what is important is the co-operation relation between employer and employee, flexibility in setting the salaries, as well as the employment and laying-off practices. Furthermore, in *UK* they lay a remarkable stress on professional management, on the close correlation between employees' remuneration and labour productiveness, on the attraction of highly qualified labour force, etc. (WEF, 2013: 468-475).

On the other hand, Denmark has a unique specific labour market and still singles out as one of the most efficient labour markets in the world, with more flexibility in setting salaries or laying-off policies and thus with a higher employment capacity than in the other European countries. (WEF, 2011:23).

If in other countries, the aspects related to labour market are regulated by a series of laws, more or less adapted to the market requirements, in Denmark, based on the existing legal norms, employers and trade unions assume together the responsibility for most aspects related to labour market. This dialogue secures civilised relations, high salaries and special labour conditions. Denmark has practically the most flexible labour market in Europe.

Moreover, Denmark reports the highest number of employees and unemployed persons attending training courses.

In Romania, *labour market operation is hindered by the existence, still largely spread, of black labour or moonlighting, by the filling of different positions based on criteria different from those of value, by labour force emigration, by the problems occurred in the employee-employer relation, by the existence of a contested legislation in the field etc.*

**Table 1:** Index of labour force efficiency in the European Union countries

Country	Labour market efficiency	
	Rank	Points
UK	1	5.42
Denmark	2	5.22
Estonia	3	5.11
Finland	4	5.00
Ireland	5	5.00
Netherland	6	4.99
Sweden	7	4.81
Latvia	8	4.78
Austria	9	4.69
Luxembourg	10	4.66
Cyprus	11	4.57
Belgium	12	4.54
Bulgaria	13	4.54
Germany	14	4.51
Poland	15	4.48
France	16	4.41
Czech Republic	17	4.32
Hungary	18	4.27
Slovakia	19	4.20
Slovenia	20	4.15
Malta	21	4.14
Lithuania	22	4.11
Romania	23	4.01
Spain	24	3.98
Portugal	25	3.80
Italy	26	3.72
Greece	27	3.56

Source: Elaborated by the authors based on the data from World Economic Forum, *The Global Competitiveness Report 2012 – 2013*, pp. 18-19.

*Note: These points are calculated by the World Economic Forum based on the statistic data or data collected with the help of surveys. In the case of surveys, the answers to questions were placed on a scale from 1 to 7 (1 corresponds to the lowest score, whereas 7 corresponds to the highest score). For each question, the individual answers are aggregated on the country level, in order to obtain the score of the respective country. On the other hand, the data from statistic sources are standardised for the same range [1, 7].*

Excessive taxation in Romania makes many firms operate outside the legal norms, which results in many employees working without a contract and consequently they cannot benefit from the diverse types of insurance and social security.

The fiscal pressure on the low-income employees was 43.8% in 2011, our country's figures being exceeded, in this respect, only by Belgium (49.7%), Germany (45.6%), France (46.5%), Italy (44.5%), Hungary (45.2%). (Eurostat, 2012: 258).

In the EU countries there are discrepancies also as regards the *labour force cost per hour (in industry and services)*. For instance, in 2007 it was 3.40 euros in Romania, higher only than the level registered in Bulgaria (1.89 euros). The highest labour force cost per hour is recorded in Denmark (34.74 euros), closely followed by Sweden (33.30 euros), Luxembourg (33 euros, and 33.63 in 2008) Belgium (32.56 euros, and 33.66 in 2008) and France (31.06, and 31.78 in 2008). (Eurostat, 2012: 259).

In Latvia, Lithuania, Slovakia and Estonia, in 2007, the labour force cost per hour was ranging between 4.40 euros and 6.60 euros, whereas in Poland, Malta and the Czech Republic it was ranging from 6.70 euros to 8.20 euros.

Although on a much lower level than in the European Union countries (except Bulgaria), in Romania “*the increase of labour force cost is much more substantial than in the EU countries, which is only natural in the process of bridging the gap to reach the level of salary incomes in the EU, but this fact translates also in the progressive loss of the comparative advantage of cheap labour force*” (Cojanu et al. 2007: 41).

Thus, even if the minimum salary has increased in these past years (in 2006 it was around 90 euros), in the first semester of 2013, according to Eurostat (2012), the minimum salary in *Romania* was 157.26 euros, the lowest in the EU, whereas the highest minimum salary is paid in Luxembourg (1874.19 euros). Thus, according to the level of the minimum guaranteed salary, the EU member states can be classified in three categories (table 2).

**Table 2:** Minimum salary in EU countries in the 1<sup>st</sup> semester of 2013

<b>Under 300 euros</b>	<b>Between 300 and 800 euros</b>	<b>Above 800 euros</b>
Romania (157.26 euros) Bulgaria (158.50 euros) Lithuania (289.62 euros) Latvia (287.07 euros)	Czech Republic (312.01 euros) Estonia (320 euros) Slovakia (337.70 euros) Hungary (340.55 euros) Poland (376.58 euros) Portugal (565.83 euros) Greece (683.76 euros) Malta (697.42 euros) Spain (752.85 euros) Slovenia (783.66 euros)	UK (1264.25 euros) France (1430.22 euros) Ireland (1461.85 euros) Netherlands (1469.40 euros) Belgium (1472.42 euros) Luxembourg (1874.19 euros)

Source: Elaborated by the authors based on the Eurostat data (2012)

Note: For the other EU countries there are no data available.

However, we must take into account that in view of growing economic efficiency, the index of salary growth must be lower than the index of labour productiveness. .

In 2011, in *Romania*, *labour productiveness per employee* was 49.4%, (figure 1) of the European Union average, higher only than in Bulgaria (44.0%).

The highest labour productiveness (above the EU average) was recorded in Luxembourg (169.1%). Labour productiveness per employee was higher than the EU average in other countries also, the highest percentages being registered in

Ireland (139.8%), Belgium (127.7%), Austria (116.8%), France (116.7%), Sweden (115.8%) - Eurostat (2012).

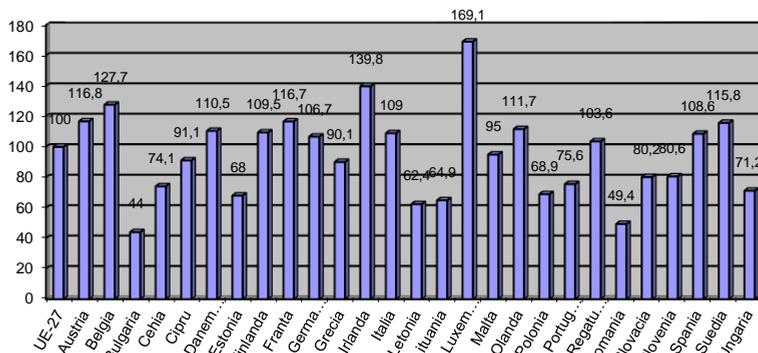


Figure 1: Labour productiveness per employee (2011)

Source: Elaborated by the authors based on the Eurostat data (2012)

Note: Greece – provisional data

As for labour productiveness per worked hour (EU-27 = 100), the highest values were recorded in Luxembourg (184%), The Netherlands (133.5%), France (130.6%), Ireland (128.2%), Germany (125.2%) – figure 2.

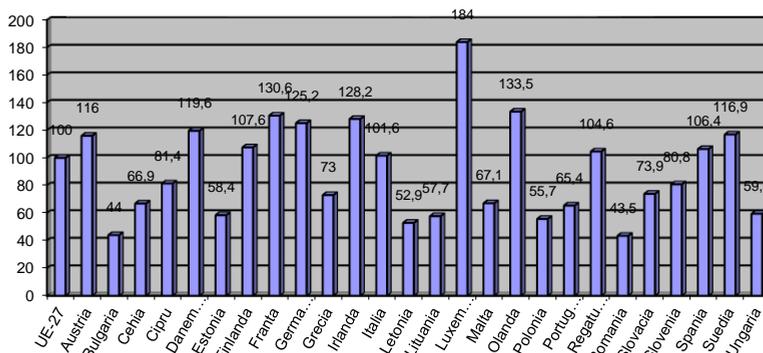


Figure 2: Labour productiveness per worked hour (2011)

Source: Elaborated by the authors based on the Eurostat data (2012)

Note: Greece and Portugal – provisional data

Belgium: no data available

The gap between our country and the EU-27 average is also apparent as regards the percentage of employed population per sectors of economy. Whereas in the European Union, in 2009, the percentage of persons employed in agriculture was only 5.1% (of total employed population), in Romania it was 29.1%. In industry, the percentage of employed population was 18% in EU-27 and 30% in Romania. On the other hand, in EU-27, more than two thirds of the employees are employed in services (67.3%), compared to only 40.9% in our country (NIS, 2010).

The high percentage of the population employed in agriculture, corroborated with the low percentage of people employed in services reflects not only the misbalances on

the labour market, but also the general inefficiency of economic activities in our country.

The fact that Romania joined the European Union had a powerful influence on its labour market, which became a component of the EU community labour market. This led to a higher mobility of labour force. Although the labour force flow is still limited by a series of regulation compared to the flow of products, services or capital (Marelli, 2006: 16-48) *in Romania, emigration has exhibited an ascendant trend, due to the better labour conditions and, first of all, due to higher wages in the other EU community countries, with negative effects in certain fields of activity confronted with a labour force deficit.*

Moreover, *Romania* is also confronted with a decline in the domain of labour force because of the *demographic stagnation and general population's ageing*, situation encountered in other states of Central Europe also, characterised by a low birth rate and an increasing death rate, which leads to the progressive reduction of the population fit for work.

In 2010 Romania's demographic situation was in regress, continuing the descendant trend begun in 1991. If on July 1<sup>st</sup> 1990, Romania's total population numbered 23.2 million inhabitants, according to the National Institute of Statistics (NIS, 2011), on July 1<sup>st</sup> 2010 it dropped to 21.4 million inhabitants, without taking into account the temporary outbound migration.

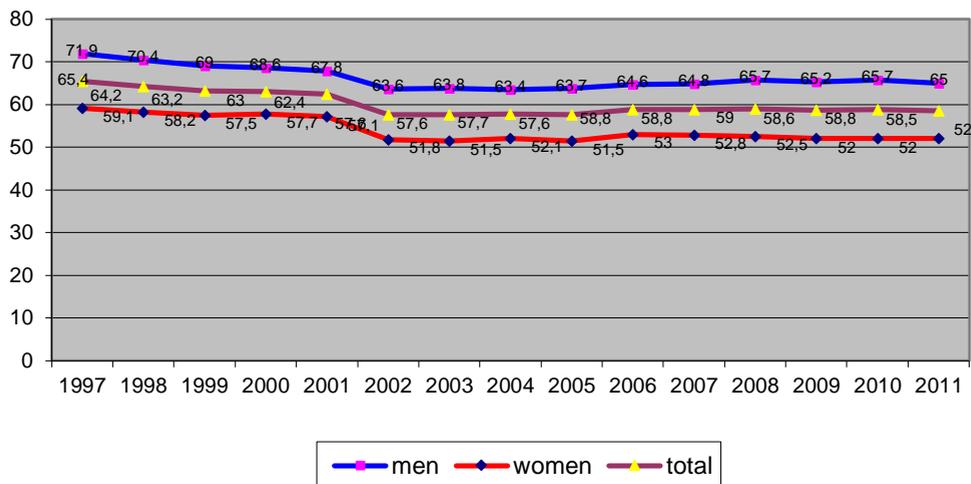
In 2011, *the employment rate* for the population aged between 15 and 64 in the EU was 64.3%, exhibiting a slight growth compared to 2010 (64.1%), nevertheless it remained *below the 70% target set by the Lisbon European Council for 2010.*

In 2011, rates higher than 70% were recorded in The Netherlands (74.9%), Sweden (74.1%), Denmark (73.1%), Germany (72.5%) Austria (72.1%), whereas rates even lower than 60% were registered in Poland (59.7%), Slovakia (59.5%), Ireland (58.9%), Bulgaria (58.5%), Spain (57.7%), Malta (57.6%), Italy (56.9%), Hungary (55.8%), Greece (55.6%) and *Romania* (58.5%). (Eurostat, 2012: 233).

As regards the employment rate among women, the Lisbon European Council set the goal that it reach 60% until 2010 (Eurostat, 2010: 282-283), but this target was not reached, not even in 2001. Thus, in 2011 the employment rate among women was 58.5% in the European Union, considerable lower than the employment rate among men (70.1%). However, in 2011, the employment rate among women was higher than 60% in almost half of the EU member states, and than 70% in Denmark (70.4%) and Sweden (71.8%).

In 2011, whereas the total employment rate in Romania was 58.5%, in the case of women it was only 52%, while the employment rate among men was 65%.

Regarded in time, in Romania the employment rate has exhibited a sinuous evolution, but with a *general descendant trend*, and it had the smallest values in the period 2002-2005 (figure 3). Thus, if in 1997 the employment rate in Romania was 65.4% (71.9% for men and 59.1% for women), in 2011 it was only 58.5% (65% for men and 52% for women).



**Figure 3:** Employment rate in Romania (1997-2011)  
 Source: Elaborated by the authors based on the Eurostat data (2012: 234)

According to Eurostat (2012: 236), the employment rate among people with higher education is, naturally, higher than among people with secondary education and even more so for elementary and middle school graduates.

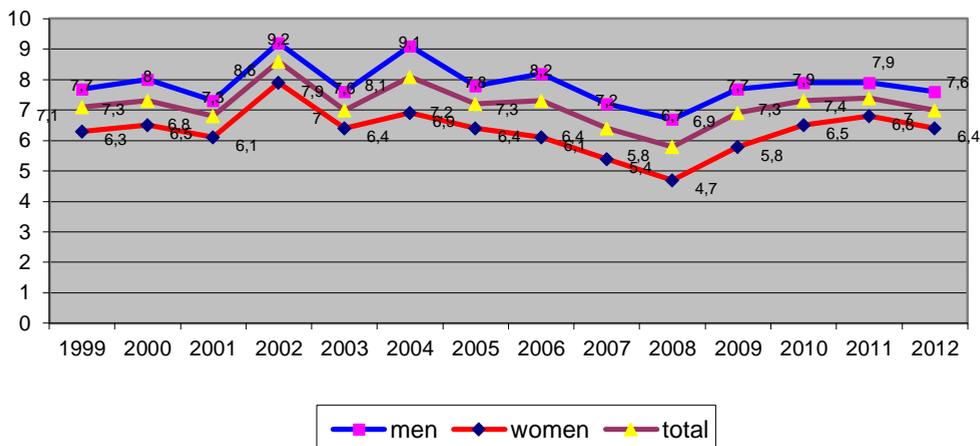
In Romania, in 2011, the employment rate among people with higher education was 82.1% (82.4% in 2010), among people with secondary education 62.3% (62.2% in 2010), and among elementary and middle school graduates 40.5% (43% in 2010). On the other hand, in the European Union, *the unemployment rate* was 9% in 2009, as the economic crisis worsened the unemployment issue, and it reached a 9.7% rate in 2010 and 2011, and 10.5% in 2012.

The highest unemployment rate was recorded in Spain, 21.7% in 2011, and 25% in 2012, and this is one of many reasons why this country is ranked among the last EU countries when it comes to labour market efficiency.

The lowest unemployment rates were registered in Austria (4.2% in 2011, and slightly higher in 2012, more precisely 4.3%), in Luxembourg (4.8% in 2011, and 5.1% in 2012), The Netherlands (4.4% in 2011 and 5.3% in 2012), Germany (5.9% in 2011 and 5.5% in 2012).

Except several countries where the unemployment rate dropped in 2012 compared to 2011 – Germany, Denmark, Estonia, Lithuania, Malta, Finland, UK, Romania – the other countries exhibit a growth of the unemployment rate in 2012.

In *Romania*, the unemployment rate was 7% in 2012, slightly descendant compared to the previous years (7.4% in 2011, and 7.3% in 2010), but higher than in 2008 (5.8%), the year with the lowest values in the last decade (figure 4). In this period (1999-2012), higher unemployment rates were recorded among the male population in 2002 and 2004 (it was above 9%, the highest values in the analysed period).



**Figure 4:** Unemployment rate in Romania (1999-2012)

Source: Elaborated by the authors based on the Eurostat data (2010: 247; 2012: 245)

### 3. Conclusion

Reality has proved that on the macroeconomic level no country has ever recorded a sustained period of economic development without granting a special attention to the human factor.

The stock of human capital existing at a certain moment is an important factor of economic and social growth and development, which is proved by the development of macroeconomic researches focused on education integration into the production functions used in the study of economic growth.

It was found that the countries with highly educated and trained population are the most productive countries from the economic viewpoint.

Thus, as our country exhibits numerous limitations on the labour market, efforts should be made for harmonising individual interests with general, society's interests, as regards training; consequently we must establish the best correlation possible between the youth qualification and economy's requirements.

Education and professional training are the most important investments in human capital, as employees' productiveness depends not only on their capacity for effort and their motivation, but also on the investments made in them, both at the place of work and beyond.

Obviously, the development of human capital is made not only through school education and professional training at the place of work, but also through investment in people's health condition.

Furthermore, we should also focus on career planning, recruitment and hiring of labour force and on the technical and human endowment of these activities with specialised personnel, as well as on labour duration, including workload.

In order to enhance professional planning and training, as well as labour conditions, we must expand the forms of employment (including part-time), in view of securing both for young graduates – "inactivity is a bigger problem among out-of-school youth than unemployment" (Scarpetta and Sonnet 2012: 4-30) – and for older persons a

rapid insertion to the labour market, as well as support from the labour market institutions.

For a labour market to function properly, the employer-employee relation is crucial and in this respect what is important is not only the atmosphere at the place of work, salary calculation and incentives granting or providing professional training courses, but also the way of planning and managing annual vacations, medical leaves or unpaid leaves.

Moreover, as regards human capital issues we must pay attention to those related to regional and national disparities in accumulating human capital, as well as to the problems of over-qualified labour force migration.

Labour market should offer population *the job change flexibility*, including shifting from one type of economic activity to another, fast and at low costs, allowing at the same time salary fluctuations. An efficient labour market should also ensure *a clear relation between the incentives offered to employees and their efforts*, as well as the best use of the available talents - which *includes the equality between men and women in the business environment*.

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## SOME CRITICAL ASPECTS CONCERNING THE INSTITUTIONAL SYSTEM OF EUROPEAN UNION

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**Abstract:** *In this paper we want to clarify and understand the decisional process in European which is related to the determination of the identity of the Union, answering to several questions concerning the implementation of the European Union into an organization, the different relations with other organizations and with the international law. In the family of the international organizations, the European Union has its own place because it realizes an economic integration project and a political one, a supranational but refusing the traditional categories of constitution and the international law. Qualifying as an international organization sui generis, EU developed a new legal order, deciding to create a supranational organization, formed by Member States and their citizens. The integration process is a permanent challenge opened to a new and developing process for solving all the internal and external problems of the EU. The States have an international "sensitivity" when the application of EU rules exceeds their obligations laid down in the Treaties to third countries and international organizations to which they have not exempted obligations. It was argued that the concept of "demos" or acting people is intrinsically linked to that of the nation-State. The issue of democratic deficit of the European Union is bound to four basic problems: the construction as a whole and therefore of the institutional system, under the principle of conferral, the Union shall act only within the limits that Member States have been conferred in the Treaties to attain the objectives that they set, The Treaty of Lisbon reinforces the legitimacy of the operation of the Union based on free and democratic will expressed by Member States. European construction is achieved through a democratic transfer of competences of the democratic States to a Commission subject to a weak democratic control, while the European Central Bank preserves absolute dominion over its monetary policy outside democratic control. The democratic deficit of the European Union must be judged in the light of the democratic ideal, which led to an ideal-type of political regime, being found itself in constant restructuring, with respect to the evolution of socio-political realities.*

**Keywords:** *decisional process, institutional, European Union, European External Action Service*

**JEL classification:** *K3, K33*

**1. Generally Introduction.** The understanding of the decision-making process in the EU is very closely related to the determination of EU identity by answering a series of questions on enframing in an international organization, its relations with other organizations and international law. Ana M. Lickova shows that in the family of international organizations, the European Union (EU) has a special place because it

realizes a supranational, economic and political integration, but rejecting the traditional categories of constitution and international law ( Lickova, vol. 19, n.3)

EU members have invested its institutions with many internal and external powers, giving rise to complicated international situation. In the EU, its Member States are and remain sovereign entities which mean that its areas of competence were the result of a transfer of competences from the national to the supranational level. The States have an international "sensitivity" when the application of EU rules exceeds their obligations laid down in the Treaties to third countries and international organizations to which they have not exempted obligations. (Ivan, A.L., (2007)

Union's situation is closest to that of the federal states, whose constitutions reserve large areas of autonomy to the sub-federal entities whose international action can cause consequences and affect the whole federation. The absence of international legal personality exempts the sub-federal entities from direct international reactions. In contrast, international sovereignty of EU member states can then expose them to the international obligations arising from wrong acts of supranational institutions.

EU members had to deal with a number of challenges long before the appearance of European Court of Human Rights and the judicial bodies of the International Trade Organizations. In these institutions, the European states have difficulties similar to the difficulties encountered by the traditional federal governments. Governments meet the challenges coming from the international effects of the international legal capacity, where documents are missing or are paradoxically incomplete. (A.M. Lickova ,(1999)

## **2. Analysis and determination of notions.**

### **The Insufficient democratic legitimacy of the EU institutional system.**

As M.V. Antonescu noted, the originality of the EU political system makes the problem of democratic legitimacy to present different aspects independently of each dimension of the Union. On the government side, the legitimacy has in view: the representation of Member States in the EU institutions, the share of votes of each state in the decision-making process, responsibilities of the EU institutions and their relationship to each other. (M.V. Antonescu, (2006)

It may be invoked the "living report" of the European citizens with the institutions, because they need to know the functioning of institutions and participate in their lives. According to the method of initial integration, goals stated by the European Communities were of economic nature. At the same time, some issues related to the implementation of its objectives, in particular those related to the integration of markets, proved to be eminently political. For example, there is the annual agricultural price fixing or the directive on the right of establishment and recognition of diplomas. Other areas that preoccupied the governments of the Member States, rather than on their citizens, as far as affecting the essential interests of the Member States, and in particular, their budgetary balance by transferring funds from the Community and tax harmonization. In some countries, especially in England and Germany, the increased level of transfers to the Community was run by politicians. In addition to the mentioned cases, the Treaty of Maastricht has raised some concerns; particularly those who opposed to the treaty presented it in an apocalyptic picture. Politicians have presented this treaty as trying to create a Super - European State, without its institutional system to work, sometimes being successful only due to general ignorance of the population (M.V. Antonescu, 2006)

Critical issues to the Treaty of Maastricht went from an anachronistic conception of the role of the State and included a series full of contradictions. It was stressed that the areas important to exercise political power were torn out from the democratic constraints. This finding may give the impression that the removal of the political power of the State - nation was by definition an anti-democratic action, thereby prompting a fundamental antinomy between democracy and supranational power. In a similar manner, we mention that popular sovereignty was unique and indivisible, so that the National Assembly was its sole representative. This position implies in particular that the transfer of powers could not be made of a mere strengthening of the powers of the European Parliament.

It was argued that the concept of "demos" or acting people is intrinsically linked to that of the nation-State. Any idea of transnational democracy is beyond any question. Similarly, limited consent of the European peoples is evoked on the European integration process. Finally, it was argued that the democratic deficit is more important to the Community institutions, than it would be at the level of national institutions. In a paper devoted to the crisis of democracy, it is shown that although the democratic ideal is materialized in forms that express the participation of the people in power, democracy is dysfunctionally marked by the de-legitimizing authority, by the fragmentation and disintegration of social groups, the discharge of the core values of democracy: equality and individualism.(M. Crozier, 1977)

### **The Democratic deficit of the European Union.**

Lady Williams, former Minister of the Labour Party in UK defined the democratic deficit as "the distance between the transferred powers to the Community level and control mechanisms from the elected parliaments that is implemented". On the other hand, we must emphasize that "between a union of states and a union of nations, there is a gray area where decisions are likely to spiral out of control" where the confusion between the operation of powers, insufficient legitimacy of institutions, lack of transparency, insufficient democratic control and restricted impact of national parliaments are manifestations of the democratic deficit. This problem does not arise only in the European Union, it equally arises in the nation-state.( Constantin Stephanou, 1997)

The draft Constitutional Treaty had in mind an ambitious European project to propel a more clearly stated political unity, supported including by a symbolism able to express its ability to solve their own problems through a European mechanism more clearly defined, and to manifest itself as an actor with a clear and distinct voice in the international arena. The Treaty not being adopted, the Intergovernmental Conference had the task of developing what was called the reforming Treaty in the sense that it wanted to meet the expectations of the Union's peoples linked to a clearer definition of the identity of the Union, but especially to a democratization of its organization and functioning "closer to citizens", addressing their life problems. It thus seeks an answer to the question raised by the Laeken European Council in December 2001 on equipping the Union with a mechanism to make it more powerful and at the same time closer to its citizens, ie, more democratic. (Clapie, Michel, (2003)

As outlined by Professor *Liviu - Peter Zăpârțan*, the issue of democratic deficit of the European Union is bound to four basic problems.

The first relates to the construction as a whole and therefore of the institutional system, legitimacy expressed by the popular will to confer to some institutions the ability to organize and lead a community based on laws and rules that are respected. In this sense, there can be a lack of legitimacy of the European construction because it is based on Treaties that are ratified by each state according to democratic procedures.

The Treaty of Lisbon considers in this respect that, under the principle of conferral, the Union shall act only within the limits that Member States have been conferred in the Treaties to attain the objectives that they set, so that any competence not conferred upon the Union remain with the Member States. Added to this is the provision of art. 3 § 3 according to which, under the principle of subsidiarity, in areas which do not fall within its exclusive competence, the Union shall act only in so far as the objectives of the proposed action can not be satisfactorily achieved by the Member States, both at central and at regional and local level, but can be better achieved due to the scale or effects of the proposed action at Union level.

The Treaty of Lisbon reinforces the legitimacy of the operation of the Union based on free and democratic will expressed by Member States because the Union institutions apply the principle of subsidiarity according to the protocol of the Treaties and national parliaments ensure the compliance with the principle of subsidiarity in accordance with the procedure laid down in the protocol.

It is believed that in this way the Union's legitimacy is judged through what is it by itself, through its identity and its unique and original way by which it was built, when states and European nations have decided on behalf of common fundamental values and aspirations of peace, security and well-being to assign part of their sovereignty attributes to build a distinct institutional system to balance the interests and wills of the Member States. It is significant in this regard, the statement at art. 8 A according to which the Union operation that is based on representative democracy, meaning that "citizens are directly represented at Union level in the European Parliament: States are represented in the European Council by the Heads of State or Government and in the Council by their governments, themselves democratically responsible either to their national Parliaments, or to their citizens. Art. 9 has changed its content in the Treaty of Lisbon stating that the Union shall have an institutional framework to promote its values, accomplishment of objectives, serving its interests and citizens of the Member States and ensure the consistency, effectiveness and continuity of its policies and actions.

The Treaty, thus, provides a legal basis for the need to have a coherent institutional framework, able to accomplish the goals for which the Union was created as her successes are proofs of that people's needs in a more efficient manner. There is a "unit tax", that is a number of benefits that accrue to people's lives that would not have been able to get in the old formats of the States. Mindful to how the Union institutions relate to their citizens, the Treaty inserts art. 16 A which states that "to promote good governance and ensure the participation of the civil society, institutions, bodies and Union bodies are working in compliance with the highest possible degree the principle of openness, the political nature of the debates in the European Parliament and in the Council ( when it deliberates and votes on a draft legislative act).

*O. Baisné* and *R. Pasquier* stated that the legitimacy of European integration strengthens as it proves its ability to meet the needs of European citizens and more, to anticipate a number of requirements it may have. It is a real change in the national

political space in which European concerns make their way of generating political behaviors, beliefs and values that re-define the political posturing. It would exist, in the interpretation of the two authors, an institutionalization of community roles and rules within each Member State, a statement of the European issues by the national political class. (O Baisné et R. Pasquier, 2007)

Some authors, including *William Outhwaite*, think that after the introduction of the European citizenship occurs a mutation in the particular civil societies that could generate future a civil European society supported by Economic and Monetary Union, by euro, by policies designed to create a freedom, security and justice space. (William Outhwaite, 2000)

A second issue raised by the discussions on the democratic deficit are connected to the representativity of the European institutions and their personnel action. In this respect, it is considered that the democratic deficit would be expressed by a combination of factors:

1. The weakness of the European Parliament (despite increasing his powers after the signing of the Maastricht Treaty). The Council is the true European legislator. In particular, the European Parliament has no control over monetary and trade policy. Elections for the European Parliament record an increasing absenteeism rate: from 37% in 1979, the absence rate reaches 50.6% in 1999 and 55.4% in 2004, hence a lack of democratic legitimacy of the European Parliament.

2. Commission President is not elected, he is appointed by the heads of states and governments under a negotiation between the leaders of the European countries. Commission accumulates functions, so it has a monopoly on initiative right, it sets the application texts of decisions taken by the Council, it performs official duties in the field of competition and it also has the power to sanction.

3. Council members have democratic legitimacy, but the Council legislates on a Commission proposal that does not have its own democratic legitimacy.

4. Decisions made by a qualified majority on trade reveal exclusively from Commission, with secret and opaque intervention of the specialist committee and the lobby – exercised by the interested stakeholders.

Organization of powers is confusing because there are three executive bodies (Competition Commission, European Council and Council of Ministers), two legislative bodies (Council of Ministers and European Parliament) and the concentration of legislative and executive with the Council.

Contrary to the principle of separation of powers inherent in any democracy, the European Union is based on the distribution among the different institutions of features that contribute to the decision making process:

- Proposal belongs to the Commission; the Parliament has only a mere advisory role;

- the Council has decision-making power;

- the Court of Justice sets legal standards;

- the Court of Auditors checks finances;

- Central Bank sets monetary policy.

European construction is achieved through a democratic transfer of competences of the democratic States to a Commission subject to a weak democratic control, while the European Central Bank preserves absolute dominion over its monetary policy outside democratic control. The absence of debate, the Commission's power supported by the Committee 133, the independent role of the Central Bank, the Commission's submission to multinational agencies, the tendency to standardize the

economy, hegemonic tendency of large countries (France, Germany, UK) with respect to the small ones, the complicated language of the Treaties "neo-colonialism" of EU with respect to the South in WTO negotiations, they all complement a picture of Europe's democratic deficit.

The reformation of European institutions is not a simple adjusting to meet enlargement as it was tried by the Treaty of Nice. The reformation of the European institutions involves a fundamental break with Europe in the Treaty of Maastricht, Amsterdam and Nice. In this regard, it may be noted that the Treaty of Lisbon doesn't introduce spectacular provisions on institutional mechanism, but a series of tendencies are noteworthy.

The concept of European democracy is enshrined in Title II which provides provisions relating to the principles of democracy on which the European construction is designed: according to art. 8 the democratic equality is enshrined stipulating that "in all its activities, the Union shall respect the principle of equality of its citizens, who benefit from equal attention from its institutions, bodies and agencies; art. 8 enshrines the idea that the functioning of the Union shall be founded on representative democracy so that every citizen has the right to participate in the democratic life of the Union, and its decisions are made as openly and closer to the citizens, while respecting the principle of subsidiarity; the dual legitimacy of Union is enshrined, by the will of states to respect the precepts of democracy, but also by the will of the people, which leads to the assertion of the need to establish cooperation between national parliaments and the European Parliament to improve the mechanism of co-decision.

The Treaty of Lisbon defines especially three levels of democratic compliance will of the people of the Union, national, states and peoples and European level will have to be based on the will of citizens.

Article 8B explicitly requires as the European institutions to maintain a constant, open and transparent dialogue with the civil society, with all the stakeholders interested in solving European problems.

Citizen initiative is stimulated by the provision of section 4 of article. 8B which states that at least one million citizens who are nationals of a significant number of Member States may invite the Commission to draw up a proposal for a legal act deemed necessary.

It should be noted that according to art. 8C, the role of national parliament's increases in the construction of the Union, in its good operation, throughout the European public life, working together, ensures the principle of subsidiarity, assessing the European policies.

All these together includes the "democratic deficit" of the EU operation because it induces the "constitutionalization" of the ultra-liberal economic model, recorded mainly in the 332 articles of the third part of TEC (comprising a total of 448 items) ignoring other possible scenarios of the European construction.

**3. In conclusion:** The Community political system tends to come closer to the American or Swiss model, rather than the German model. These three systems coincide with the Community system in relation to the issue of central bank independence. In the latter case, the absence of a central government and parliamentary control allow the ECB to act only after their own logic imposed by the treaties, without knowing a counter - power. Even the implementation of a European government responsible in front of the European Parliament and of the European Council eventually, it would be on the transformation way of the current Union into a

federal entity, an inevitable stage as long as they would realize that the democratic deficit stems from the absence of such institutions.

The democratic deficit of the European Union must be judged in the light of the democratic ideal, which led to an ideal-type of political regime (in the Weberian sense of the term), being found itself in constant restructuring, with respect to the evolution of socio-political realities. A proof of this is the fact that altogether with the strengthening of the unity of the European peoples appeared new requirements of organization and management at the institutional level, to which the sequence of treaties tried to answer them. The Treaty of Lisbon is subscribed to this philosophy that will represent the basis of a future reforming treaty when the degree of European integration will increase.

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***SUB-SECTION: THE IMPACT OF FOREIGN LANGUAGES ON THE  
BUSINESS ENVIRONMENT***



## L'INTERCOMPREHENSION DANS LE CONTEXTE ENDOLINGUE

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*Abstract: Porquier (1984) defines the exolingual communication as the communication between individuals who do not share a common language, in opposition to endolingual communication, which is the communication between individuals sharing the same native language. Calling in this opposition, our paper brings forward the problem of intercomprehension and incomprehension in the endolingual space. Intercomprehension is nowadays almost exclusively associated to plurilinguism and a series of curricula of foreign language simultaneous learning. It is considered that the exolingual situation is by excellence a state of communicational risk and its management is more difficult, for it does not guarantee the success in communication. Polarizing the research in this direction unfortunately casts a shadow on the opportunity of debates on intercomprehension in one's native tongue. And this is due, as Tyvaert (2008) showed, to the fact that "we should avoid pretending from linguistic intercomprehension what cannot be accomplished by intralinguistic intercomprehension". It is naturally acceptable that the lack of intercomprehension leads to incomprehension, therefore to the misinterpretation or annulment of communication between people speaking the same language. In the context of linguistic training of future economists, we consider that the lack of intercomprehension in one's native tongue often originates in the deficiencies of speciality knowledge. Therefore, we can state that an economist who does not understand an economic message in his native tongue cannot generate "endolingual intercomprehension". According to a recent study on a representative sample of students from the Faculty of Economic Sciences of Oradea, we have tried to prove the above hypothesis and to render the students sensitive regarding the study of foreign languages. The results entitle us to consider that the lack of intralinguistic intercomprehension (due to deficiencies in the speciality field) leads to incomprehension, diminishes the person's willingness to start a plurilingual communication, thus compromising the chance of an interlinguistic intercomprehension, so necessary to the contemporary geostrategic space.*

**Keywords:** *intercomprehension, endolingual communication, economic, foreign language*

**Cod JEL:** *Y8*

## Préambule

Rémy Porquier (1984 : 17) définit la *communication exolingue* comme la communication établie entre les individus qui ne partagent pas une langue maternelle commune, par opposition à la *communication endolingue*, qui est établie entre des individus qui ont une langue maternelle commune.

L'intérêt pour l'intercompréhension (dorénavant IC) se manifeste aujourd'hui prioritairement dans le champ exolingue, en relation avec la didactique des langues étrangères. Nous présenterons en ce qui suit quelques lignes générales qui définissent *l'intercompréhension exolingue* et nous nous arrêterons ensuite à *l'intercompréhension endolingue*, avec une extension vers l'apprentissage des langues étrangères sur objectifs spécifiques.

### 1. L'intercompréhension et la communication exolingue

L'une des définitions les plus usuelles de l'intercompréhension appartient à Doyé (2005 : 7), qui la décrit comme « l'activité de personnes de langues maternelles différentes qui communiquent en s'exprimant dans leur propre langue et en comprenant la langue de l'autre ». L'intercompréhension est aujourd'hui un concept incontournable dans le champ exolingue. Elle est prioritairement associée au plurilinguisme et à une série de programmes d'apprentissage simultané des langues étrangères, dont nous retenons : EuRom4, dirigé par Claire Blanche-Benveniste à Aix-en-Provence, Galatea, initié par Louise Dabène à Grenoble, EuroComRom, développé à Frankfort par Horst G. Klein ou InterCompréhension Européenne (ICE), programme conduit à Reims par Eric Castagne et J.-E. Tyvaert.

L'intercompréhension se sert, en tant que dispositif de formation, d'une structure formelle et pragmatique propre, avec des acteurs qui ont une représentation exacte des entraves de la communication. La situation exolingue est, en contexte communicatif, une situation de risque, maîtrisée grâce à l'habileté des participants qui gouvernent non seulement la situation linguistique et les effets de parenté linguistique, mais aussi des configurations culturelles et interculturelles. Les apprenants doivent prendre en compte le fait que les langues étrangères *a priori* inconnues, ne le sont cependant pas. Nous pouvons considérer, dans cette perspective, qu'« il apparaît indispensable, pour des raisons d'efficacité, de tenir compte de l'acquis antérieur de l'apprenant » (Dabène, 1994 : 37).

Dans notre pratique d'enseignement-apprentissage, nous nous revendiquons du programme InterCompréhension Européenne (ICE), où l'on considère que l'expérience devient un « outil de communication plus efficace que les mots » (Castagne, 2004). Une catégorie importante de savoirs est représentée par les connaissances non linguistiques : chaque apprenant dispose d'un ensemble de connaissances que l'on appelle encyclopédiques et qui entrent dans son capital personnel. L'un des défis des enseignants de langues étrangères serait d'amener les apprenants « à prendre conscience de différentes catégories de connaissances dans lesquelles ils pourront trouver des clés d'interprétation » (Doyé, 2005 : 14) et d'exploiter efficacement toutes les ressources dont ils disposent : les connaissances générales, culturelles, situationnelles, comportementales, pragmatiques, scripturales, à côté des connaissances purement langagières (phonologiques, grammaticales et lexicales). Tous ces composants sont activés lors de l'intercompréhension à des degrés qui varient selon les personnes et les contextes.

On pourrait donc anticiper que la communication exolingue est fortement dépendante des connaissances que les apprenants dominent dans leur langue maternelle, c'est-à-dire dans des circonstances de communication endolingue.

## 2. L'intercompréhension et la communication endolingue

La discussion sur l'intercompréhension dans la communication endolingue peut paraître un truisme, au regard d'une question telle que « pourquoi a-t-on besoin de parler d'intercompréhension puisque la compréhension est de mise entre des interlocuteurs qui parlent une langue commune ? ». La problématique de l'intercompréhension entre les membres d'une même communauté n'est cependant pas sous-entendue et elle représente le fondement sur lequel peut se dresser la communication exolingue.

Malgré les préjugés, le terme d'*intercompréhension* apparaît dans plusieurs domaines, dont celui économique (en relation avec le développement organisationnel, la délibération publique, les pratiques de négociation, la culture entrepreneuriale, etc.). Si les spécialistes mettent en discussion le besoin d'intercompréhension, c'est parce que vraisemblablement elle n'apparaît pas toujours entre les parleurs d'une même langue.

L'observation des ressources lexicographiques auxquelles nous avons eu accès témoignent d'une transition terminologique : l'appréhension de l'IC comme phénomène complexe multi-facettes (Degache et Melo, 2008), acquérant une spécialisation certaine dans la didactique (Ferrão Tavares *et al.*, 2010 ; Jamet, 2010) trouve ses sources dans la perception de l'IC comme phénomène objectif propre à une communauté qui partage la même langue ; dans ce sens, nous retenons une première approche de l'IC endolingue comprise comme « une notion technique utilisée par les linguistes et les anthropologues qui déterminent sur le terrain [...] les limites entre parlers, dialectes et langues » (Blanche-Benveniste, 2008 : 41). Cette acception est commune à la sociolinguistique et elle représente le point de départ pour toutes les portées actuelles de l'intercompréhension.

**Une autre approche, qui figure dans les éditions du *Petit Larousse* depuis 1998, retient la définition synthétique d'un terme spécialisé, circonscrit au domaine linguistique « *intercompréhension = ling. compréhension réciproque* » (cf. Jamet, 2010, la première mention du terme dans ce dictionnaire daterait de 1988). **Dans le sens de cette définition, l'*intercompréhension* est un phénomène qui sous-tend une série de processus de communication entre des personnes qui parlent la même langue et travaillent dans des milieux qui supposent une compréhension réciproque sans faille, afin d'éviter les *incompréhensions*.****

Dans la communication endolingue avec des interlocuteurs unilingues, ceux-ci partagent idéalement les mêmes savoirs linguistiques, ce qui ferait croire que l'*intercompréhension* des communicateurs est une évidence. Or, malgré le partage de la langue commune, plusieurs situations d'*incompréhension* relèvent de la situation endolingue : « l'*incompréhension* règne dans les relations entre les humains [...] Elle est quotidienne, omniprésente, planétaire, elle enfante les malentendus » (Morin, 2004 : 121).

Dans le cadre endolingue, on retiendra le cas des langages des professions, générateurs d'*incompréhension* intralinguistique : « Les variétés linguistiques ne sont pas simplement dues au fait qu'on a du portugais, de l'italien, du danois [...] mais aussi parce que certains parlent mathématiques, d'autres parlent droit, d'autres

parlent anatomie, d'autres parlent politique, et que les difficultés qu'on a à se retrouver dans ces langues posent de nombreux problèmes » (Authier, 2004 : 56).

Si dans le cas de la communication endolingue l'incompétence linguistique peut représenter un facteur de séparation, dans la communication exolingue elle peut devenir un élément catalyseur, qui met en place des stratégies autres que celles purement linguistiques. Nous reprenons à Authier l'exemple des bûcherons de toute l'Europe réunis en France pour discuter de leur profession : l'excellence dans le domaine n'était pas doublée d'une excellence linguistique, parce que non seulement ils avaient une maîtrise des langues européennes extrêmement lacunaire, mais la plupart parlaient le patois d'origine. En dépit des conditions communicatives impropres, ils avaient atteint une compréhension satisfaisante favorisée par « un être ensemble bien particulier », né de la pratique et des intérêts communs, qui transcendaient les insuffisances linguistiques (Authier, 2004 : 55).

Ci-dessus, nous avons montré que l'intercompréhension renvoie prioritairement à l'enseignement-apprentissage de plusieurs langues de la même famille, dans des programmes qui se distinguent de la formation traditionnelle. Mais l'intercompréhension est bien un composant central dans tout apprentissage de langues étrangères, tel qu'il se présente habituellement dans les établissements scolaires européens. Nous aborderons en ce qui suit le rôle de l'intercompréhension endolingue dans le monde professionnel, en relation avec l'apprentissage d'une langue étrangère sur des objectifs spécifiques.

### **3. Sensibilisation des étudiants économistes à l'apprentissage des langues étrangères**

Certes, on apprécie que l'absence de la compréhension, c'est-à-dire l'*incompréhension* dans la langue maternelle, empêche l'*intercompréhension* des locuteurs qui parlent la même langue ; par voie de conséquence, elle influe d'abord sur l'apprentissage d'une autre langue étrangère et ensuite sur l'intercompréhension des locuteurs qui utiliseraient plusieurs langues. Les propos de Tyvaert (2008 : 254) sont suggestifs : puisque « rien ne nous assure de nous intercomprendre parfaitement entre locuteurs d'une seule et même langue, on se gardera d'exiger de l'intercompréhension interlinguistique ce qui n'est pas réalisé par l'intercompréhension intralinguistique ».

L'hypothèse de départ est que les étudiants apprennent une langue étrangère s'ils mettent en œuvre consciemment toutes les ressources dont ils disposent. L'expérience nous a démontré que l'une des résistances des apprenants à l'apprentissage des langues étrangères, plus particulièrement du français langue étrangère, tient à la perception d'une *déficience au niveau linguistique* : les étudiants ont presque toujours la conviction d'une incompétence personnelle, manifestée en relation avec la grammaire, le vocabulaire et la phonétique de la nouvelle langue, en l'occurrence du français. Or, la démonstration suivante prouvera que la principale source des hésitations interlinguistiques réside dans ce que nous pourrions nommer l'*incompétence encyclopédique*, qui sous-tend une incompétence professionnelle plus ou moins problématique.

Afin de sensibiliser les étudiants économistes à l'apprentissage du français des affaires, qu'ils considèrent en général comme une langue difficile, nous avons réalisé une petite étude exploratoire sur un échantillon de 63 étudiants de la Faculté des Sciences Économiques d'Oradea.

### 3.1. Étude

L'étude a été réalisée dans le cadre d'un cours de français langue étrangère, IIe année d'études (spécialisations finances et banques, comptabilité et informatique de gestion, management, affaires internationales, économie du commerce, du tourisme et des services). Les fragments choisis pour la présente analyse ont été extraits d'un matériel non-didactisé, représentant l'étape de l'exploitation didactique des documents authentiques de profil économique, en français et/ou en roumain.

Un simple essai de traduction de fragments de textes du roumain en français, sans difficultés grammaticales ou lexicales particulières, a relevé des syncopes au niveau de la maîtrise des termes en langue maternelle. Par l'observation du comportement des apprenants, nous avons retenu la perception générale de ceux-ci : la source de la difficulté de traduire les phrases en français résiderait, selon eux, dans la difficulté même de la langue française. Vu la récurrence de cette situation didactique, nous avons décidé de réaliser un exercice qui les détermine à reconsidérer leur point de vue.

Tout d'abord nous avons retenu 3 phrases, extraites de trois articles au sujet économique d'actualité, publiés sur des sites spécialisés consacrés. Nous avons demandé aux étudiants d'expliquer (par écrit), dans leur langue maternelle, le sens global des phrases exposées ; afin d'éloigner le stress dû à une situation d'examen scolaire, une note ludique a été attribuée à cette démarche, par l'introduction d'un personnage imaginaire, un jeune adulte qui n'est pas spécialiste du domaine économique et qui demande des explications simples, dans la langue maternelle, à propos de la signification des fragments examinés. Ce personnage imaginaire a eu le rôle de reconstituer une situation de communication réelle et possible, fondée sur l'intercompréhension intralinguistique.

Ensuite, nous avons examiné les réponses des étudiants, concluant sur certains points qui ont confirmé l'exigence d'une compétence professionnelle dans la langue maternelle.

Deux précautions s'imposent : premièrement, on admet l'effet de contagion qui détermine les étudiants à s'inspirer l'un de l'autre, malgré les consignes explicites de l'enseignant ; deuxièmement, on reconnaît l'influence de la spécialisation des étudiants sur l'appréhension de l'un ou de l'autre des termes. Les étudiants, si réactifs cependant dans une situation de vérification classique des connaissances, n'ont pas réclamé la présence de quelque thème non-étudié. Ils ont tous reconnu la pertinence de la maîtrise des concepts visés, indépendamment du domaine de spécialisation (d'autant plus qu'il s'agissait de termes habituellement véhiculés dans les journaux télévisés).

### 3.2. Discussion

Le besoin de la démonstration nous a déterminée à introduire un argument de contraste : deux phrases sans aucun lien avec l'économie (l'une extraite d'un article de physique et l'autre retirée d'un article d'informatique) ont été ajoutées à la série de 3 phrases aux sujets économiques. Les phrases soumises ont été les suivantes : *Phrase 1* : Informația cuantică este foarte fragilă și nu poate fi clonată, astfel că pentru a preveni alterarea ei sau chiar pierderea de informații, este necesar controlul total asupra tuturor componentelor rețelei. Cea mai mică memorie staționară pentru informația cuantică este atomul, iar fotonii reprezintă mijlocul perfect de transmitere a sa ([www.stiintasitehnica.com](http://www.stiintasitehnica.com)).

*Phrase 2* : Câteva din noile funcționalități introduse în SQL Server 2008 sunt configurarea bazată pe politici a suprafeței expuse, management extensibil a cheilor de criptare, Criptare/Decriptare transparentă a datelor ([www.revistait.ro](http://www.revistait.ro)).

*Phrase 3* : Ratingurile de suport și ratingurile pentru datoriile pe termen lung și scurt ale UniCredit Țiriac Bank, Zagrebacka Banka și ZAO UniCredit Bank se bazează pe potențialul sprijin disponibil de la banca mamă UniCredit S.p.A. Confirmarea ratingurilor lor de suport la '2' reflectă opinia Fitch că UniCredit S.p.A. va continua să sprijine aceste subsidiare ([www.capital.ro](http://www.capital.ro)).

*Phrase 4* : FMI oferă „oportunitatea“ guvernului să reducă arieratele și să eficientizeze companiile de stat ([www.zfr.ro](http://www.zfr.ro)).

*Phrase 5* : Nu sunt incluse în sfera de aplicare a prezentei ordonanțe de urgență creanțele înscrise la masa credală în cadrul unei proceduri de insolvență ([www.just.ro](http://www.just.ro)).

Après un premier aperçu de l'ensemble, nous avons commencé le test proprement dit et nous avons enregistré les observations suivantes : à la lecture de la première phrase, tous les étudiants ont refusé une explication, ont ri et ont décliné clairement leur compétence ; à la lecture de la deuxième phrase, 2 étudiants sur les 63 examinés ont essayé timidement de donner une explication, justifiant leur compétence (l'un d'entre eux étudiait aussi l'informatique et l'autre était un passionné du domaine).

La lecture des trois phrases suivantes a relevé, à quelques exceptions près, d'un même paradigme. Nous n'avons pas voulu faire un examen polarisé de chaque phrase, ayant seulement l'intention d'identifier certaines lignes qui caractérisent le rapport des apprenants à ce type de situation authentique et soulignant un cadrage qui pourrait être pris en compte dans le processus d'enseignement-apprentissage. Chaque situation a été ensuite mise en relation avec un niveau plus complexe d'intercompréhension, à savoir l'intercompréhension exolingue dans une communication d'affaires ; le schéma est illustré avec des exemples tirés des réponses (en roumain) données à la troisième phrase, aménagés de certaines conduites des apprenants.

### 3.3. Proposition d'analyse

**Incompréhension intralinguistique totale** (celle qui pourrait influencer radicalement sur une décision d'affaires)

- *reconnue par écrit ou à l'oral, avec honnêteté (déclinaison assumée de la compétence):* « Je ne sais pas. », « Je n'en ai aucune idée. » ;
- *reprise exacte et intégrale du texte source ;*
- *simple reformulation du texte* utilisant un changement de topique : « UniCredit Țiriac Bank, Zagrebacka Banka și ZAO UniCredit Bank se bazează pe potențialul sprijin disponibil de la banca mamă UniCredit S.p.A. pentru ratingurile de suport și ratingurile pentru datoriile pe termen lung și scurt. » ;
- *information extrêmement sommaire* : « băncile sunt sprijinite de Unicredit S.p.A » ;
- *compréhension erronée* : « Fitch este director. » ou « Fitch este un grup important în cadrul băncii. »

- **Compréhension intralinguistique approximative** (prémisse d'intercompréhension parcellaire, celle qui pourrait influencer partiellement sur une décision d'affaires)
- *compréhension correcte, mais incomplète* dans l'économie de la signification du texte en langue maternelle : « cele trei bănci sunt sprijinite de banca mamă; ratingul se referă la anumite cote ce trebuie atinse de o bancă, cote ce se referă în principal la aspectele financiare. ». Dans un nombre important d'explications de ce type, on remarque l'absence de référence au terme « Fitch » ;
- *compréhension partiellement correcte, partiellement incorrecte* : ce modèle reprend le type de situation exposée *supra*, avec la mention que les termes « Fitch » ou « rating » ne sont pas correctement expliqués ;
- *actualisation d'un sens secondaire* d'un terme économique repéré dans le texte ; par exemple, dans le cas du mot « rating », 3 étudiants ont évoqué le sens propre aux analyses média : « ratingul reprezintă o anumită instituție, un canal TV. ».
- **Compréhension intralinguistique totale** (garantie d'intercompréhension et de décision d'affaires correcte)
- *saisie du sens précis de la phrase* ; formulé sous une forme ou une autre, ce type d'interprétation surprend le sens correct de la phrase, à savoir la disponibilité ou la capacité de la banque mère d'assurer le besoin de capital et les liquidités pour les banques filles énumérées. On retient également l'élargissement des explications vers d'autres termes, les analogies, l'enrichissement du contenu (par exemple, « Toate băncile amintite sunt filiale ale băncii mamă, UniCredit S.p.A. Ratingurile se referă la nivelul la care este percepută banca. Dacă ratingul este mic, atunci băncile vor pierde clienți. Dacă pierd clienți, înseamnă că nu vor mai realiza venituri. Fitch este o organizație care dă note băncilor și le încadrează în diferite niveluri. »).

### 3.4. Interprétation quantitative

L'interprétation quantitative fournit les résultats suivants : incompréhension totale – 12 cas sur les 63 examinés, à savoir 19%; compréhension approximative – 41 cas sur 63 examinés, à savoir 65%; compréhension correcte et totale – 10 cas sur les 63 examinés, à savoir 16%. Les limitations d'espace ne permettent pas d'exposer ici toutes les analyses concernant les autres phrases au sujet économique. Nous retenons cependant qu'elles s'inscrivent, sans différences notables, dans le même paradigme, les pourcentages correspondants se situant aux alentours des mêmes scores : environ 20% incompréhension totale, plus de la moitié compréhension approximative et environ 15% compréhension correcte.

## 4. Conclusions

La prise en compte des manifestations d'incompréhension et d'intercompréhension endolingues qui interviennent dans la formation des étudiants en sciences économiques, à savoir les futurs professionnels de l'économie, nous conduit à l'identification des relations suivantes :

- le manque de compréhension en langue maternelle (endolingue) est synonyme d'*incompréhension* en langue maternelle (endolingue) ;

- l'*incompréhension* en langue maternelle (endolingue) ne génère pas d'*intercompréhension* en langue maternelle (endolingue) ;
- l'absence d'*intercompréhension* intralinguistique (endolingue) empêche l'*intercompréhension* exolingue.

Certaines conduites sont parlantes pour la relation que les apprenants instituent avec la tâche didactique, en rapport avec une situation d'incompréhension ou d'intercompréhension : quand l'incompréhension est partagée par tous les membres d'un groupe, elle est « mieux vécue » (elle est reconnue à haute voix, en unanimité, étant accompagnée de rires et de regards complices). Alors que dans un groupe il y a plus de deux ou trois personnes qui comprennent le contenu, deux types de réaction sont saisissables : soit on leur demande de mutualiser les connaissances, soit on cache difficilement les sentiments de culpabilité (regards de travers, hésitations ou grimaces).

Nous pouvons conclure sur trois aspects d'ordre général : tout d'abord, dans un contexte endolingue professionnel, l'*incompréhension* d'un message (à l'écrit ou à l'oral) rend impossible son traitement ultérieur dans une langue étrangère ; ensuite, l'*intercompréhension* unilingue erronée ne peut se fonder que sur un traitement erroné et elle a toutes les chances de générer une *intercompréhension* exolingue fautive ; finalement, l'*intercompréhension* unilingue partielle conduit à une *intercompréhension* exolingue partielle, tandis que l'*intercompréhension* totale s'avère être une source d'*intercompréhension* exolingue pertinente.

Il est donc impérativement nécessaire que la mise en place des compétences langagières en langues étrangères s'associe aux connaissances circonscrites au domaine professionnel et dominées dans la langue maternelle. On ne peut pas enseigner aux étudiants économistes le français des affaires (et à la rigueur l'anglais ou l'allemand des affaires) si les étudiants ne maîtrisent pas le vocabulaire des affaires dans leur langue maternelle.

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# RECEPTION OF SPOKEN ENGLISH. MISHEARINGS IN THE LANGUAGE OF BUSINESS AND LAW

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**Abstract:** *Spoken English may sometimes cause us to face a peculiar problem in respect of the reception and the decoding of auditive signals, which might lead to mishearings. Risen from erroneous perception, from a lack in understanding the communication and an involuntary mental replacement of a certain element or structure by a more familiar one, these mistakes are most frequently encountered in the case of listening to songs, where the melodic line can facilitate the development of confusion by its somewhat altered intonation, which produces the so called mondegreens. Still, instances can be met in all domains of verbal communication, as proven in several examples noticed during classes of English as a foreign language (EFL) taught to non-philological subjects. Production and perceptions of language depend on a series of elements that influence the encoding and the decoding of the message. These filters belong to both psychological and semantic categories which can either interfere with the accuracy of emission and reception. Poor understanding of a notion or concept combined with a more familiar relation with a similarly sounding one will result in unconsciously picking the structure which is better known. This means 'hearing' something else than it had been said, something closer to the receiver's preoccupations and baggage of knowledge than the original structure or word. Some mishearings become particularly relevant as they concern teaching English for Specific Purposes (ESP). Such are those encountered during classes of Business English or in English for Law. Though not very likely to occur too often, given an intuitively felt inaccuracy - as the terms are known by the users to need to be more specialised -, such examples are still not ignorable. Thus, we consider they deserve a higher degree of attention, as they might become quite relevant in the global context of an increasing work force migration and a spread of multinational companies.*

**Key words:** verbal communication; mondegreens; teaching EFL; mishearings in ESP classes.

**JEL classification:** Y80; Z00; K00.

## 1. Preliminary remarks

Oral communication presents certain peculiarities given the fact that the filters interposed between the speaker and the hearer are more numerous than in written English.

### 1.1. Faulty perception of spoken language

Spoken language can provide grounds for occurrence of faulty reception. "Mondegreens are a sort of aural malapropism. Instead of saying the wrong word, you hear the wrong word ... Mondegreens are in a sense the opposite of malapropisms; they result from something being misheard rather than missaid ...

The word mondegreen is generally used for misheard song lyrics, although technically it can apply to any speech.” (Austin, 2008)

Research into the matter of perception of spoken English sometimes provides examples of mishearings but does not necessarily name the phenomena as “mondegreens” and does not discuss or analyse the concept, which would not be the point anyway. The matter is rather the diagnosis of the misperceptions and the attempt to better understand the process of misperception in order to be able to preempt it. As demonstrated by Linda Shockey, non-natives are very likely to interpret and decode the sequence of sounds they hear, in a way more familiar to them: “We assume that a lack of familiarity with casual speech is a major factor in their lack of comprehension.” (Shockey, 2003: pp.120-1)

Psychological and environmental factors intermingle in the perception process. This results in a peculiar distortion of the sounds heard or in a particular construction of meaning attributed to some uncertain collection of sounds. An inadequate or poor knowledge and comprehension of the notions heard combined with a personal propensity or a predisposition to react towards fulfilling various expectations on the background of a particular cultural and intellectual baggage on part of the receiver are faced with a sometimes tricky or misleading syntactical structure. This is often new or unfamiliar and maybe delivered at a high speech rate, with a certain accent or a sophisticated intonation, or perhaps lacking an appropriate quality not only if the sound is recorded.

### **1.2. Definition of the term ‘mondegreen’**

So, what is a mondegreen and how did it come into being? “A mondegreen is a word that is construed as it is actually heard, not as the speaker intends it to be heard ...” (Safire, 1994) “Although some linguists have called this stumblepunning ‘unwitting paronomasia,’ the better word is mondegreen. Coiner is the writer Sylvia Wright, who noted in a 1954 Harper’s article that some children happily sang in church of ‘Gladly, the cross-eyed bear,’ when the hymn was ‘Gladly the cross I’d bear.’ She remembered the Scottish ballad ‘The Bonny Earl of Murray’ and how she had recited it as a child: ‘They have slain the Earl Amurray, / And Lady Mondegreen.’” (Safire, 1994) Of course, “It eventually transpired that Lady Mondegreen existed only in the mind of Sylvia Wright, for the actual lyrics said that they ‘slay the Earl of Murray and laid him on the green.’” (Safire, 1994) “And to this day Lady Mondegreen’s name has been used to describe all mishearings of this type!” (Austin, 2008)

## **2. The usual mondegreen**

Researchers in the field of linguistics have become more and more aware of the phenomenon and it quickly acquired the status of phonetic process. As William Safire notices, “In a 1987 essay in Time magazine, Gregory Jaynes found a way of surviving the stress of New York City: He recalled a pastor’s asking him in his youth to rise and sing Hymn No. 508, ‘Lead On, O Kinky Turtle.’ Later, he found it had been intended as ‘Lead On, O King Eternal,’ but ‘in the days since, the phrase lead on, o kinky turtle has assumed a profound significance in the course of my wanderings. I use it in a kind of incantatory fashion, muttering ‘lead on, o kinky turtle’ whenever I feel shorted, stiffed, put upon by outside forces.’” (Safire, 1994)

## 2.1. Famous examples

The most famous mondegreens (Feldman, 2007), given as examples in almost all contexts where the theme is discussed, seem to be:

- In lyrics:
  - "Excuse me while I kiss this guy", instead of "Excuse me while I kiss the sky" - Jimi Hendrix in Purple Haze,
  - "The girl with colitis goes by", misheard for "The girl with kaleidoscope eyes" - The Beatles in Lucy in the Sky With Diamonds
  - "There's a bathroom on the right", for "There's a bad moon on the rise" - Creedence Clearwater's Bad Moon Rising
- In the medical field: "Varicose veins" heard as "Very close veins"
- In mass-media: "Paper View TV" understood instead of "Pay-per-view TV."

## 2.2. Common mondegreens

Some other examples of common mondegreens, as remarked by researchers (Cowan and Rakusan, 1998; Edwards, 1995; Kissell, 2008; Nordquist, 2013) or at the Center for the Humane Study of Mondegreens (Carroll, 2003: E-12), can be seen in table 1, a collection showing that researchers into the field particularly relied and focused on lyrics. This comes only natural as it is in songs that mondegreens are more often. (see also Austin, 2008) People are used to communicate plainly, to speak and hear at the normal pace, rate, rhythm, tonality and intonation of the standard discourse. The peculiar melody or the sometimes forced pace of the lyrics may trigger a new combination of syllables or a more familiar structure, for instance.

**Table 1:** Examples of common mondegreens

<i><b>Mondegreen</b></i>	<i><b>Original</b></i>	<i><b>Origin</b></i>
"Are you going to starve an old friend?"	"Are you going to Scarborough Fair?"	Scarborough Fair, Simon and Garfunkel
"Baking carrot biscuits."	"Taking care of business."	Takin' Care Of Business, Bachman-Turner Overdrive
"Bohemian Rap City"	"Bohemian Rhapsody"	Queen
"Born under a bad sign with a boom boom in your eyes."	"Born under a bad sign with a blue moon in your eyes."	A3, Woke Up This Morning
"Bring me an iron lung."	"Bring me a higher love."	Higher Love, Steve Winwood
"Crimean River."	"Cry Me a River."	Cry Me a River, Julie London
"Dead ants are my friends; they're blowin' in the wind."	"The answer my friend is blowin' in the wind."	Blowin' In The Wind, Bob Dylan
"Donuts make my brown eyes blue."	"Don't it make my brown eyes blue."	Don't It Make My Brown Eyes Blue, Crystal Gale
"Got a lot of lucky peanuts."	"Got a lot of love between us."	Let's Hang On. Frankie Vallee and the Four Seasons

<i>Mondegreen</i>	<i>Original</i>	<i>Origin</i>
"Hope the city voted for you."	"Hopelessly devoted to you."	Hopelessly Devoted to You, Grease
"I blow bubbles when you are not here."	"My world crumbles when you are not here."	I Try, Macy Gray
"I got no towel, I hung it up again."	"I get knocked down, but I get up again."	Tubthumping, Chumbawumba
"I never had me a better time in a textile mill, oh my,"	"I never had me a better time and I guess I never will"	Crocodile Rock, Elton John
"I'll be your xylophone waiting for you."	"I'll be beside the phone waiting for you."	Build Me Up Buttercup, The Foundations
"I'll never leave your pizza burning"	„I'll never be your beast of burden"	Beast of Burden, The Rolling Stones
"I'm a pool hall ace."	"My poor heart aches."	Every Step You Take, The Police
"Just brush my teeth before you leave me, baby."	"Just touch my cheek before you leave me, baby."	Angel of the Morning, Juice Newton
"Mama don't take my clothes 'n' throw 'em away."	"Mama don't take my Kodachrome away."	Kodachrome, Paul Simon
"Midnight after you're wasted."	"Midnight at the oasis."	Midnight at the Oasis, Maria Muldaur
"... no ducks or hazards in the classroom."	"... no dark sarcasm in the classroom"	Another Brick in the Wall, Pink Floyd
"She's got a chicken to ride."	"She's got a ticket to ride."	Ticket to Ride, The Beatles
"Sweet dreams are made of cheese"	"Sweet dreams are made of these"	Sweet dreams are made of these, Eurhythemics
"Sleep in heavenly peas."	"Sleep in heavenly peace."	Silent Night, Christmas carol
"The ants are my friends"	"The answer, my friend, is..."	Blowing in the Wind, Bob Dylan
"What a nice surprise when you're out of ice."	"What a nice surprise bring your alibis."	Hotel California, Eagles
"You and me and Leslie."	"You and me endlessly..."	Groovin', The Rascals
"You make the best homemade stew around."	"You make the best of what's still around."	When The World Is Running Down, The Police

**Source: author's design on information from references cited in the paragraph above**

### 3. Mishearings in ESP classes

Next, some similar situations, met as a lecturer at the University of Oradea, teaching English at the Faculty of Economics and the Faculty of Law, will be presented. Funny surprises discovered in papers written on various listening materials, called forth a

deeper research into the matter and more careful examination of the notes students took. Further observations and some experiments both in dictation and listening comprehension revealed the presence – if not really regular, than at least often enough to be pertinently considered a relevant phenomenon – of mistakenly perceived phrases.

### 3.1. “Pearls” in Business English classes

Several examples of such ‘pearls’, as we are accustomed to name the “logic-linguistic confusions”, can be seen in table 2.

**Table 2:** Selection of mishearings met during Business English classes

<b>Original fragment</b>	<b>Misheard structure</b>
Under these terms, they hived off the retail operation	And he disturbs the height of the retail operation
Payment’s now past due	Payments go part stewed
Bargaining comprises of all these	Burden income prizes and all fees
Bidding means putting forward a proposal	Building is good in form of the proposal
Avoid default under the promissory note	If all the fault and all the promise are remote
The bill came to five grands	Then Bill Gates won high rates
Out of pocket expenses were paid back	Out of packages pence for a paid bag
He paid in cash and checked his change	He paid in cash on chequed exchange
There is high level maintenance on the free market	This hardly ever meant announcing a flee market
The bottles were hand wrapped	The bottles were hard trapped
Passengers who booked cabins	Passing chairs to look at this
On board you’ll be entitled to free meals	Abroad he’ll be in the title of two-three mails
They ‘il have the surcharge refunded	They have this new judgment founded
They retained the distinctive long-necked glass	They retained the instinct of a non-backed class

**Source:** author’s design on own data

We can note that while some misinterpretations are totally outside the field of business, rather illogical and quite hilarious, most examples preserve or try to retain a certain mark of the domain, yet. Still comical, as they attempt to fit in the context but hardly manage to, we can assume that the minds of the subjects must have struggled to somehow keep the register, to stay in some way inside the fields of business.

As English is a language much used in the filed of business, tourism, international trades, transportation, international affairs, marketing and other domains of communication – speaking, hearing and understanding – in this ‘lingua franca’ of the world economy, and, given the fact that mistakes can easily occur with non-natives - yet not only with non-natives-, this aspect of the process of mishearing might prove quite relevant.

A business meeting, a presentation, a telephone conversation or a negotiation might lead to odd results if participants ‘hear’ something different from what was said or

unintentionally ‘interpret’ the sounds heard, construing a new phrase, like in the old game of ‘the wireless phone’. Not very common – as the very nature of the specific terminology used does neither logically nor normally allow even margins, let alone large ranges, of potential interpretation –, but, nevertheless, possible, such mishearings demand a certain attention and could benefit from a deeper investigation.

### 3.2. Occurrence in classes of English for Law

Fixed expressions and strict terminology of proceedings are very unlikely to create confusion in the minds of those who have been trained and work in the field of law since they are familiar with the lexical particularities and the specific notions and concepts of their profession. All the same, the non native students preparing for the field of law in a non-English language might have problems with the terminology of English juridical language which they approach during the university years. They only deal with it during their first two study years and are not too probable to use it in an English speaking court environment, for instance. That is because the law system differs and specialised studies would be required for someone to be allowed to work in the English law system. Still, some mishearings might appear in their activity when researching and tackling documentation, when going to conferences or talking to a non-native English speaker about professional matters.

Some examples of misperceptions of law terminology encountered during classes of English with law students can be seen in table 3. Unlike with students in economics, as seen in table 2, we shall note that the register is now in most cases changed to a standard one. There are now rather scarcely preserved instances of juridical discourse as this is, indeed, more difficult to construe.

**Table 3:** Mishearings met during English for Law classes

<i><b>Original text</b></i>	<i><b>Misheard structure</b></i>
Improper appropriation of funds in one’s keeping	In a proper preparation he finds the housekeeping
Misdemeanour is not punishable by imprisonment	Mister Minnor is now punishing one of the prisoner
Plea bargaining is resorted to so as to speed up trial	Plea bargaining is resulted if she asked to speak of trial
They sent a subpoena to summon the witnesses to court	They sent us some peanut and to some of the witnesses a card
The libel refers to written defamation	The liable returns a written information
Confess against the promise the sentence will be lighter	Confess that great supporters of sentence will delight her
The court extended the protection	The court is bent in the profession
Measures that grant suspects the benefit of due process of law	Assures the grand suspects the bona fide to process the law
The Chancellor of the Exchequer controls the public finances	The chance of those that win a cheque can close the public finances

**Source:** author’s design on own data

Even if rarely likely to occur, mistakes in the perception of terminology of law might have rather unpleasant outcomes. We can imagine, for instance, the consequences

that can be brought about, in bureaucracy and formalities, by an official document of the court that is issued containing such mistakes as a misplaced punctuation, a defective linkage of syllables or even missing words, due to a mishearing and a wrong transcription of the procedures.

#### 4. Conclusions

A particular failure in perceiving speech, often seen as a funny perception mistake, mondegreens are mostly encountered when it comes to lyrics as it is in songs and poems that sounds might be distorted by a certain imposed rhythm. Yet, misperceived terms may arise in other fields, too. From dry, silly or really dull, to mildly amusing, odd, or plainly ludicrous, the erroneous hearing of certain words or phrases may spring from any listener faced with whatever speaker – more or less experienced, native or not. It is doubtless that all domains of life and activity may register instances of the aforementioned mishearings, and with learners of English it comes all just natural.

Having a rather limited occurrence, these special ‘mondegreens’ or mishearings in professional activities – if these ‘mistakes in hearing’ can be applied as such to the said domains – are not, in our opinion, of a very extensive occurrence. Thus they cannot be considered to produce relevant negative effects. Still, the presence of these sorts of misperceptions noticed during the English classes with non-philological students, i.e. students not trained philologically, should at least stir attention and drag awareness to the fact that unintended puns can emerge, or, rather, be received and interpreted wrongly, even in the most formal fields of human activity.

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## ECONOMY, ECONOMICS, ECONOMIC, ECONOMICAL

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**Abstract:** *To speak and understand a language means - among many other things - knowing the words of that language. The average speaker knows, hears, understands and uses thousands of words daily. But does he use them appropriately? For this reason the paper is why this paper is about words and meanings. More specifically, it deals with the internal structure of complex words, i.e. derivatives. Therefore, the purpose of the paper is to enable students and potentially other individuals dealing with English language on business basis to engage in their own analyses of some aspects of the language, namely the family tree of the word economy. After having read the paper, the reader should become familiar with the necessary knowledge regarding differences between meanings, misuse and actual sense of words deriving from economy, be able to systematically analyze data and relate his own findings on theoretical language problems. English is used by hundreds of millions speakers and still there is always need for improving our knowledge continuously. Knowing and speaking approximate English may not be enough at an advanced level as in the case of students who prepare themselves for careers that involve proficient communication in a foreign language on specific business issues. This is where the idea of such a paper appeared: students of the Faculty of Economic Sciences talk about economy and all the other terms deriving from it, with approximate knowledge of their meaning, without even being aware that some 'minor' suffixes like -ic, -ical, -ics etc. really matter and do make a difference. Consequently, we started our teaching of Business English lecture in September 2012 with a working sheet based on the terms economic/ economical/ economics/ economy to assess students' awareness of these terms. The result was not a surprise as more than 90% misused economical instead of economic. That seemed a perfect introduction for students in economics. From that moment on, the building of their specific vocabulary could start.*

**Keywords:** *economy; economics; economic; economical; -ic/-ical adjectives*

**JEL classification:** Y90

### **Introduction. Dictionary considerations.**

For a better understanding of all the nuances the words in questions may have, we will proceed with several dictionary considerations.

*Economy* 1. careful management of resources to avoid unnecessary expenditure or waste; thrift; 2. a means or instance of this; saving; 3. sparing, restrained, or efficient use, esp. to achieve the maximum effect for the minimum effort e.g. economy of language; 4. a. complex of human activities concerned with the

production, distribution, and consumption of goods and services; b. particular type or branch of such production, distribution, and consumption, e.g. a socialist economy, an agricultural economy; 5. the management of the resources, finances, income, and expenditure of a community, business enterprise, etc. 6. a. a class of travel in aircraft, providing less luxurious accommodation than first class at a lower fare; b. (*as modifier*) e.g. economy class; 7. *modifier* offering or purporting to offer a larger quantity for a lower price e.g. economy pack; 8. the orderly interplay between the parts of a system or structure e.g. the economy of nature; 9. (*philosophy*) the principle that, of two competing theories, the one with less ontological presupposition is to be preferred; 10. (*archaic*) the management of household affairs; domestic economy.

*Economics* 1. *functioning as singular* the social science concerned with the production and consumption of goods and services and the analysis of the commercial activities of a society; 2. *functioning as plural* financial aspects e.g. the economics of the project are very doubtful.

*Economic* –adjective 1. of or relating to an economy, economics, or finance e.g. economic development, economic theories; 2. (*British*) capable of being produced, operated, etc. for profit; profitable e.g. the firm is barely economic; 3. concerning or affecting material resources or welfare e.g. economic pests; 4. concerned with or relating to the necessities of life; utilitarian; 5. *a variant of* economical; 6. (*informal*) inexpensive; cheap.

*Economical* –adjective 1. using the minimum required; not wasteful of time, effort, resources, etc. e.g. an economical car, an economical style; 2. frugal; thrifty e.g. she was economical by nature; 3. *a variant of* economic (sense 1), economic (sense 2), economic (sense 3), economic (sense 4); 4. (*euphemistic*) deliberately withholding information (esp. in the phrase economical with the truth). (<http://www.collinsdictionary.com/english-thesaurus>)

There is another useful observation at this point, regarding the word *economy* and its derivatives: there is a divergence of the pronunciation of the word family based on *economy* /ɪˈkɒnəmi/ - *economics* /,i:kəˈnɒmɪks/, *economise* /ɪˈkɒnəˌmaɪz/, *economic* /,i:kəˈnɒmɪk/, *economical* \,i:kəˈnɒmɪkəl \ and this is mainly due to the 'length' of the first vowel.

## 2. Introduction to word formation and affixation in English. Adjectival suffixes

The adjectival suffixes of English can be subdivided into two major groups (Ingo Plag, 2002:118). A large percentage of the derived adjectives are *relational adjectives*, whose role is simply to relate the noun to the adjective that qualifies the base word of the derived adjective. For example, *economic thinking* means 'a thinking having to do with economy, referring to economy, characterized by economy', *institutional regulations* means 'regulations having to do with institution requirements', etc.

On the other hand, there is a large group of derived adjectives that express more specific concepts, and which are often called *qualitative adjectives*. Sometimes relational adjectives can adopt qualitative meanings, as can be seen with the derivative *technical*, which has a relational meaning 'having to do with technique' in the sentence *He is a technical genius*, but which also has a qualitative sense 'conforming to the rules of technique', as in *This is a technical problem*. Thus, relational adjectives occur only in attributive position, creating what Plag (2002) calls as *prenominal* modifiers (as in *a technical problem*) and when found in predicative

position in a clause (as in *This sentence is technical*), they usually have adopted a qualitative sense.

## 2. 1. Word formation. *-ic* and *-ical* adjectives

A very interesting and productive phenomenon of English word-formation is that of *-ic* and *-ical* adjectives such as *economic/economical*. This whole group of adjectives formed with *-ic* and *-ical* suffixes poses several problems to linguists and language teachers likewise with consequences in their use, thus affecting students as well. To support the idea of being one of the trickiest elements of English in use, here is, for instance, the question: *Is it 'electric cord' or 'electrical cord'?* Although hardly scientific or academic, a simple Google search reveals 184,000 results for 'electric cord' and 274,000 for 'electrical cord' While the latter option is the clear winner, a very sizable minority uses the former. To make matters even more confusing, in some instances the distinction appears relatively clear. English speakers would probably feel that 'electric guitar' is a much better choice than 'electrical guitar'. Similarly, English speakers would probably vastly prefer 'electrical engineering' to 'electric engineering.' (Silas McCracken, 2009)

According to Stefan Th. Gries (2001b) there are two main issues regarding this group of suffixes: first of all, the difficulty to detect any pattern governing the distribution of suffixes: when does an adjective end in *-ic* only and when does it end in *-ical* only? And further, for the cases when one adjective root takes both suffixes (*historic(al)* etc.), what problems do we encounter: are the two forms a pair synonymous, or to what degree do the two newly formed adjectives differ in meaning or is their different meaning expressed only by means of these affixations or is there some other possibility to distinguish between the different adjective forms?

It seems that the morphological rules in English regarding *-ic* and *-ical* are quite complex, perhaps suggesting that the meanings of forms with *-ic* and *-ical* have either become more similar or have diverged over time. Consider numeric/numerical, *botanic/botanical* which appear almost interchangeable. Conversely, there are pairs with different meanings: *classic* refers to 'belonging to the highest class or degree' whereas *classical* refers to the culture of ancient Greece or Rome or it may also refer to works of art of the so called *classical* period in the 18th century (*I am studying classical languages.*); *comic* refers to artistic comedy comic opera and *comical* means 'funny' (*She had a comical expression on her face.*); *politic* means wise, prudent or shrewd while *political* means 'connected with politics'.

Being a relational suffix, *-ic* attaches to foreign bases (nouns and bound roots). Quite a number of *-ic* derivatives have variant forms in *-ical* (*electric - electrical, economic - economical, historic - historical, magic - magical* etc.). Sometimes these forms are clearly distinguished in meaning in other cases it remains to be determined what governs the choice of one form over the other.

Roughly speaking, there are two categories of attitudes regarding the choice of one suffix over the other: on the one hand, there are very pessimistic researchers (Ross, 1998:41–43, Fowler, 1926:249) claiming that the choice is often immaterial; Snell (1972:57) considers that: *'If and when similarly formed adjectives end in -ic or -ical cannot be determined by rules'*; on the other hand, there are other theoreticians who formulated some more or less scientific rules or observed certain pattern in making the choice: *'the forms in ic may indicate either the quality or the category of thing, but that those in -ical always, or almost always, indicate the quality only [...] I dare*

say this is no more than a tendency, but I think it exists' (Jespersen, 1942:391), or Marchand (1969) tried to conclude that *-ic* adjectives derive from the 'basic substantive', whereas *-ical* adjectives in turn derive from *-ic* adjectives. The idea was echoed by Hawkes (1976:95) who argues that: *'the adjective in -ic, derived from the root substantive, has a semantically more direct connexion with that root idea; the adjective in -ical, a derivative of itself from an adjective form, has a looser connexion with the root idea and often takes on a correspondingly looser meaning'*. The same proposal is embraced by dictionaries, i.e. according to Collins English Dictionary and Thesaurus *-ical* is 'a variant of *-ic*, but [has] a less literal application than corresponding adjectives ending in *-ic*', but no example is discussed. When making the distinction between the two suffixes, another idea emerged: adjectives ending in *-ic* denote more specific/scientific meanings, whereas adjectives ending in *-ical* refer to more general/ common meanings. In Table 1 there is a visual, schematic representation of some possible distinctions between *-ic* and *-ical* adjectives:

**Table 1:**

<i>-ic</i>	<i>-ical</i>
quality and category	quality
direct connection to root substantive	less direct connection to root substantive
specific	less specific/ more general
genuine	resembling/ imitation
positive	less positive/ negative
Scientific terms	wider/ common use

Source: Findings and claims on *-ic/-ical* adjectives, Stefan Th. Gries, A corpus-linguistic analysis of English *-ic* vs *-ical* adjectives, 2001:75

Nevertheless, the findings and proposals of pattern presented do not all hold up to scrutiny. Obviously, there are some adjectives that are distinguished by the help of their ending: *politic(al)* and *economic(al)*). However, most of them do not seem to follow any rule. Neither recent dictionaries nor recent studies could clarify on the matter. Thus, *'if one intends to examine the contemporary usage of particular adjectives, the use of corpus data is a much more reliable way to pursue'* (Gries, 2001:79). In his attempt, Gries proposes an analysis of the pairs of adjectives following the patterns of proposed generalizations presented in Table 1. and concludes that they often apply only to a limited set of adjectives (while not applying to other adjectives where the distinction would also make sense); they are in some cases contradicted by the data (Gries, 2001:80).

Thus, referring to the *-ic/-ical* pair of adjectives we can summaries:

- English has a number of parallel adjectives with *-ic* and *-ical* endings;
- These endings are similar in their forms and origins but somewhat different

in their meanings and uses.

- There is no rule or consistent pattern governing the formation of adjectives ending in *-ic* and *-ical*. Some *-ic* words are preferred over their *-ical* counterparts (e.g. *ironic* over *ironical*), and vice versa *-ic* counterparts (e.g. *metaphorical* over *metaphoric*, *alphabetical* over *alphabetic*).
- When in doubt about which form is preferred or whether an *-ic/-ical* word pair has differentiated, the only way to know for sure is to check a dictionary or other reference source – for that you really have to become aware of that possibility and not ignore it.

## **2.2. Economic and economical: economic pertains to economy; economical means not wasteful.**

### **2.2.1. Difficulties in using economic and economical**

The synonymous pair *economic/economical* may pose difficulties. ‘Economic’ and ‘economical’ are two adjectives that are frequently used interchangeably. They are clearly related but they have distinct meanings. According to the *Oxford English Dictionary*, the definition of *economic* is ‘relating to economics or the economy’; however, *economical*, means ‘giving good value or return in relation to the resources used or money spent; sparing in the use of resources or money’.

When talking about ‘the economic situation’ or ‘the economic outlook’ of a country, i.e. where we are discussing ‘the economy’, then the adjectival suffix *-ic* is preferred:

e.g. The host will interview the winners and losers from current *economic* situation.

There was a rise in unemployment due to the *economic* downturn.

The *economic* outlook in this country is now bleaker than at any time in the last ten years.

It’s not about money - he is fine from an *economic* perspective.

However, when referring to making personal economies and saving money, we tend to use *economical* as it also means using the minimum amount of time or energy.

e.g. The most practical and *economical* way to see Canada is by air.

An *economical* car uses a minimum amount of gas to drive a maximum number of miles.

Politicians are invariably *economical* with the truth.

We wanted to make the most *economical* use of our time.

The main confusion arises when using *economic* and the actual meaning is *economical*, like in the phrase ‘economical with the truth’, which is a euphemism for lying, being deceitful, brought into popular usage by the British civil servant Robert Armstrong. Who used the phrase correctly, but many do not as they do not get the actual meaning, thinking of economy-related issues, i.e. ‘economic with the truth’ ([http://en.wikipedia.org/wiki/Economical\\_with\\_the\\_truth](http://en.wikipedia.org/wiki/Economical_with_the_truth)).

The same confusion appears, nevertheless in phrases like ‘economical domain’, ‘economical studies’ when the real meaning has to do with economy or economics and not with being thrifty or saving money, like in following example taken from a blog, thus showing the wide interest dedicated to this topic:

‘A local furniture store used to advertise, ‘We’re feeling the economical pinch...’ with a big banner ad in the newspaper. The store finally went out of business. I couldn’t help thinking it was because they didn’t understand the difference between ‘economic’ and ‘economical’.’

In colloquial English, the distinction between the two words is often blurred, but it is always useful to know the correct meanings, especially when your job is or will be dealing with this field of study.

If we look at the data, we find that:

- *economic* and *economical* are not completely different but share some significant collocates (*processes, reform, repair* etc) which can be interpreted in either way;
- *economic* and *economical* can be synonyms in two senses only:
  1. Things relating to the economy. e.g. You could speak of *economical* growth, although *economic* growth is more common.
  2. Using the minimum amount of effort or resources. e. g. You could speak of someone making *economical* use of their time. *Economic* would also work in that context.

In other words, when meaning wealth, financial rewards, or the science of economics, *economic* should always be employed; on the other hand, *thrifty* or *frugal* can only be replaced by *economical*.

### 2.2.2. Challenges in teaching economic and economical to students

Becoming aware of the troubles and confusions created by *economy* and its family tree we decided to dedicate some time to explaining our students the differences in meanings and their semantic values, pointing out the hilarious effects of their misuse in some context. Consequently, we started our teaching of Business English lecture in September 2012 with a working sheet based on the terms *economic/ economical/ economics/ economy* to assess students' awareness of these terms. The result was not a surprise as more than 90% misused *economical* instead of *economic*. That seemed a perfect introduction for students in economics.

Here is the working sheet used to introduce the topic of economy in our Business English lecture:

#### 1. Mind-mapping and brainstorming



Figure 1.

#### 2. Quiz

Use the discovered words - *economy, economics, economic, economical* - to fill in the empty spaces:

1. I got an \_\_\_\_\_ flight to Spain for £99 return.
2. What has gone wrong with the \_\_\_\_\_ system during the last ten years?
3. The house has a very \_\_\_\_\_ heating system so bills are not a big problem.

4. We have to keep fares high enough to make it \_\_\_\_\_ for the service to continue.
5. You should use your resources \_\_\_\_\_.
6. She thought herself as an \_\_\_\_\_ housewife.
7. Larger tubes of toothpaste are more \_\_\_\_\_.
8. \_\_\_\_\_ is the oldest of the social sciences.
9. A market \_\_\_\_\_ is one in which the price of goods is fixed according to both cost and demand.
10. I got an \_\_\_\_\_ flight to Spain for £99 return.
11. Many people believe that inflation leads to \_\_\_\_\_ decline.
12. This country has an industrial \_\_\_\_\_.
13. He studied \_\_\_\_\_ at Harvard University.
14. It is not always \_\_\_\_\_ for buses to run on Sundays.
15. A small car is more \_\_\_\_\_ than a large one.
16. There has been a slow down in \_\_\_\_\_ activity recently.
17. The government's management of the \_\_\_\_\_ has been severely criticised.
18. Everybody is convinced that the President's new \_\_\_\_\_ policy will bring about an improvement in the American \_\_\_\_\_.
19. Further inflation would endanger our \_\_\_\_\_ seriously.
20. He is studying for a degree in \_\_\_\_\_.

### 2.3. *Economy and economics*

Starting from the assumption that *economics* is a dangerously heterogeneous notion, it is the branch of knowledge concerned with the production, consumption, and transfer of wealth, the study of how society uses its scarce resources and that *economy* refers to a social system that produces, distributes, and consumes goods and services in a society, the wealth and resources of a country or region, we express our intention of performing a brief analysis of the two terms in order to discover which of the two versions: *economy/economics* deals better with what is ordinarily understood as economic. And this is a necessity coming from the experience of translating curricula after curricula, documents describing the objectives, requirements and contents of the domains to be found at The Faculty of Economic Sciences. Do we say either 'World Economics' or 'World Economy' based on what semantic grounds?

Although the general tendency is to consider translation as something that anybody can do with the help of a dictionary, producing a written text using another text as a basis is actually a much more complex phenomenon. And it becomes even more complex when the text in question deals with specialized subjects such as economics. Thus, the ability to interpret specific information requires some knowledge about the syntactic and morphological structure of the foreign text, beside terminological, cultural, contextual, conceptual aspects. Translating these terms bothers (or it should) all kind of categories and here is a genuine example:

*Hello to everybody!*

*Could you please explain what's the difference between these two terms - Economics and Economy. I have to translate some information about my university into English but I've been troubled by the name of the department. What's the most acceptable one - The Department of Management and Economy*

of Nature Use or The Department of Management and Economics of Nature Use? Thank you!

Source: <http://www.usingenglish.com/forum/ask-teacher/141358-economics-economy.html>

As previously affirmed, there is a family of words related to *economics*: *economy*, *economic*, *economically* and naturally there is the corresponding science, *economics*. We refer to *economy*, as the system or set of economic interactions of a whole society; we can also speak about the economy of a person or a firm. The English words *economy* and *economics* can both be traced back to the Greek words οἰκονόμος, namely the one who manages a household, a compound word derived from 'Oikos' means household and 'Nomos' management. Going back in time, for Aristotle, *economics* was a practical, a moral science and 'the economic' referred to the use of what is needed to achieve the Good Life (*Politics*, I). It is linked to material 'human' necessities; this is a 'field-determined' notion of economics as opposed to the 'discipline-determined science' as Crespo distinguishes (2007: 2). Further, the art of household management was applied by the Greeks to the governing of polis (i.e. a city or state) and the term *economics* was applied by them to the governing of state or city. For this reason *economics* was originally called *political economy*. It was Alfred Marshall who first used the term *economics* for *political economy*, in his 1890 book *Principles of Economics*.

According to Adam Smith, political economy was '[a] branch of the science of the statesman' (*Wealth of Nations*, Book IV, Introduction), consequently stressing the same 'field-determined' notion of *economics* referring to practical or moral science. Crespo (2007: 3) considers that the evolvement toward a discipline-determined science began in the 19<sup>th</sup> century.

According to Thomas Carlyle, a 19<sup>th</sup>-century Scottish writer, *economics* is a 'dismal science' that has been described in many ways, few of them flattering. The most concise, non-abusive, definition is the study of how society uses its scarce resources.

Today, the range of fields of study examining the economy gravitates around the social science of economics, but may include other field of study as well: sociology, history, geography. Practical fields directly related to the human activities involving production, distribution, exchange, and consumption of goods and services as a whole, are engineering, management, business administration, applied science, and finance.

Today, the art of household management is practiced by everybody, from governments to common individuals for managing day-to-day economic problems. Thus, in the modern or practical sense, *economics* means management or solution of the day-to-day economics problems, arising from unlimited wants and limited resources, by economizing or wise distribution of the limited resources among different uses; *economics* is the science that studies how human beings try to satisfy their unlimited wants with limited means or resources.

Thus, *economy* is the state of the finances, purchasing, jobs, imports, exports, etc of a country, state, province, region, etc.; *economics* is a subject that studies economies and their various aspects, thus referring to the science.

#### 2.4. Illustration of different usages of *economics* and *economy*

To be sure I often broke this rule, as people are apt to do with rules of the kind; it was not possible for a boy to wade through heavy articles relating to English politics and *economics*, but I do not think I left any paper upon a literary topic unread, and I did read enough politics, especially in Blackwood's, to be of Tory opinions; (*My Literary Passions* by Howells, William Dean, <http://www.thefreedictionary.com/economics>)

While much had been done in England in tracing the course of evolution in nature, history, *economics*, morals and religion, little had been done in tracing the development of thought on these subjects. (*The Analysis of Mind* by Russell, Bertrand, <http://www.thefreedictionary.com/economics>)

At last they gave it up as hopeless, and shook the dust of the shorthand schools, and the polytechnics, and the London School of *Economics* from their feet for ever. (*Pygmalion* by G.B. Shaw <http://www.thefreedictionary.com/economics>)

She told Helen that he always called on Sundays when they were at home; he knew about a great many things--about mathematics, history, Greek, zoology, *economics*, and the Icelandic Sagas. (*The Voyage Out* by Woolf, Virginia, <http://www.thefreedictionary.com/economics>)

Effects of inflation were felt at every level of the *economy*.

John Stuart Mill, By a mighty effort of will, Overcame his natural bonhomie And wrote 'Principles of Political *Economy*' (Edmund Clerihew Bentley, *Biography for Beginners*, 'John Stuart Mill', <http://quotes.yourdictionary.com/economy>)

No *economy* ever stands still. (Sir Roy Harrod, *The British Economy*. <http://quotes.yourdictionary.com/economy>)

Our policy is directed not against any country or doctrine, but against hunger, poverty, desperation and chaos. The purpose shall be the revival of a working *economy* in the world so as to permit the emergence of political and social conditions in which free institutions can exist. (*Speech at Harvard, 5 Jun, announcing the European Recovery Plan (ER A) that became known as the Marshall Plan.* (George C(atlett) Marshall,

<http://quotes.yourdictionary.com/economy>)

Samples of names of university subjects: *Political Economy, Labour Economics, Institutional Economics; Econometrics, Financial Economics, Growth Economics, Data Processing Systems and Applications in Economics etc.*

### 3. Conclusions

The purpose of defining terms is to understand meanings, nature, characteristics and limitations as possible. Knowing as much as possible is our purpose as teachers. Knowledge of *economics* gives you a unique perspective of the world community and is an essential tool for good decision making. *Economic* ideas and principles are used by world leaders and corporate executives to make decisions that change the course of human history. How do government budget deficits and debt affect the *economy*? Many drivers will still be looking to cut their fuel consumption by investing in more *economical* cars.

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## L'ÉTUDE DES LANGUES MODERNES ET LA RESPONSABILITÉ POUR LA MIGRATION QUALIFIÉE

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**Abstract:** *Among the “vicious” or “secondary” personal mobility effects, the brain drain has become the most disturbing trend for the least developed countries barely out of communism. Its consequences on social and economic development have not yet been measured.*

*We suggest a reflection on solutions (only few at present) that our university finds in order to adapt to the international transfer of human capital. Starting from the responses to questions about the aspirations and migration projects of students from the Faculty of Economics and Business Administration, aspiring entrepreneurs, we have been able to observe a radical change in attitude towards the historical migration.*

*Although the migration phenomenon is considered as being natural in any tumultuous period of history, the current migration differs from the twentieth century one, because it is caused by the growing rate of unemployment and the inability of the people to create new jobs.*

*Young people are sort of exiled because some do not want to leave the country as their precedecessors from the communist regime, but they are pragmatic and want higher salaries. In the case in which they leave the country, they do it having in mind the thought of returning at the moment they find an opportunity in Romania.*

*The Romanian educational system displeases the young by its nature, too theoretical and less practical, by the scarcity of offers of internships in companies. The paradox is that few of the students go study for bachelor and master degrees abroad, although they acknowledge the superiority of the Western education system. The survey shows that while studying abroad, the majority of students get a job, also because the scholarship does not cover their living expenses.*

*Students go abroad for a high quality of life, professional opportunities and for recognition of the individual value. They are attracted by lower corruption, possibilities of professional development and appreciation of their work by the employer.*

*Those of them who decide to come back are justified by numerous opportunities to launch a new business, opportunity to exploit its expertise in order to change the Romanian society. Emotional connection with friends and family and not least patriotism are mentioned by almost all respondents, which is a surprise to a generation considered to be cosmopolitan.*

*Knowledge of foreign languages and intercultural accommodation with the Western civilization through university studies, smooth the progress of migration, but they are not its cause.*

**Key words :** *globalisation, migration qualifiée, fuite des cerveaux, rapatriement*

## **Classification JEL : F22**

### **1. Introduction**

L'ère de la globalisation a eu des conséquences rapides en Roumanie qui a vu sa main d'œuvre, qualifiée ou non qualifiée, quitter en masse une économie fragile. Pour cette économie qui n'a pas encore retrouvé son chemin depuis 1989, les conséquences sont graves et à long terme. Parmi les plus évidentes sont la désertification du marché de la main d'œuvre, la fluctuation du PIB et la fausse croissance économique, la perte des élites, l'incapacité d'assurer un enseignement de qualité et l'anéantissement du système médical.

Comme Alan Winters et Maurice Schiff (2004), nous considérons que les avantages de la fuite des cerveaux sont peu importants par rapport à ses désavantages, surtout dans le domaine de l'enseignement où il faut assurer la continuité des élites et du savoir, de l'intérêt pour la recherche et la conservation de l'identité culturelle. Les conséquences sont encore plus graves pour les pays de petite ou moyenne taille comme la Roumanie.

L'objectif de l'article est de constater la situation présente dans notre université pour ensuite trouver des solutions pour déterminer nos étudiants à rester en Roumanie et contribuer au développement de notre économie.

### **2. Les étapes de la migration de la main-d'œuvre roumaine**

La migration de la main-d'œuvre roumaine hautement qualifiée est un phénomène historique qui se continue avec les mêmes caractéristiques et presque les mêmes chiffres : ceux qui étaient pro occidentaux avant 1989 sont partis après. Nous constatons plusieurs étapes durant les cinquante dernières années à partir des cycles politiques traversés :

#### **2.1. Entre 1948-1989**

La fin de la deuxième guerre mondiale et l'avènement du «communisme », caractérisés par la «dictature du développement» (Roman, 1999) et le manque de libertés sociales et de pensée. Les modalités de départ des intellectuels et des autres catégories de la population étaient :

- la fuite illégale vers les États-Unis et le Canada, mais aussi en Europe Occidentale (après une excursion, une visite de parents, un stage professionnel, etc.) avec un passage obligé dans un campus de réfugiés quand ce n'était pas la prison correctionnelle de retour dans son pays d'origine ;
- la « vente » d'Allemands et de Juifs à destination de leurs pays d'origine ;
- les réfugiés politiques et économiques, les dissidents du parti communiste et les autres mécontents du régime qui demandaient l'asile politique et profitaient d'une aide matérielle sérieuse pour des raisons de propagande anti-communiste. Les bruits courent que pour l'Allemagne, en récompense de la renonciation au droit de propriété (sur la maison ou l'appartement nationalisés) de Roumanie, un vrai pécule était donné comme prime d'installation à l'insu des Allemands natifs, qui se seraient révoltés d'un tel commerce.

## **2.2. Entre 1989-2007**

Le mouvement anti-communiste qui a écroulé le dictateur Ceaușescu, actuellement regretté par une partie de la population, la plus démunie qui soit, et l'adhésion de la Roumanie à l'UE sont considérés de plus en plus comme une acceptation conjoncturelle, payée par de petites trahisons envers nos «frères» Serbes et par une alliance sans réserves à toutes les décisions américaines, à l'encontre de la «vieille» Europe, qui fut pourtant notre alliée traditionnelle depuis la création de l'État roumain moderne.

Ce qui caractérise cette deuxième période, ce sont les nouvelles modalités de départ qui sont apparues :

- une taxe de départ officielle, payée par le migrant après des interviews à l'Ambassade du Canada (de l'ordre de milliers de dollars par personne pour la zone anglaise et un peu moins pour le Québec qui voulait encourager l'identité française) ;
- la loterie des visas pour l'Amérique du Nord, programme qui se déroule à présent encore et qui sélectionne des métiers et des personnes ayant des études supérieures : ingénieurs, médecins, infirmiers, professeurs ;
- La structure des migrants a changé durant cette période car une nouvelle catégorie de migrants apparaît, les sans études supérieures, agriculteurs en Espagne et en Italie et travailleurs dans le bâtiment qui se déplacent tous vers l'Europe occidentale, le Royaume-Uni y compris.

## **2.3. Après 2007 jusqu'à présent**

C'est la période qui a suivi notre adhésion à l'UE. Il y a deux tendances à prendre en compte : la continuation de la migration des ouvriers agricoles pauvres, mais en revanche on assiste au début de la migration intellectuelle massive non seulement vers l'Amérique du Nord, mais surtout vers l'Europe Occidentale. Certains métiers sont privilégiés : médecins et professeurs. À vrai dire, ce sont les deux catégories dépréciées par le pouvoir politique, découragées par des salaires très bas par rapport aux autres catégories professionnelles, situation maintenue même après l'abrogation de la loi de la salarisation unitaire, le 22 novembre 2010 qui a eu comme résultat une diminution des salaires de 25 %, une continuation des licenciements (30 000 en 2011) et la suppression de toutes les allocations et aides, sauf celles visant le travail de nuit.

En même temps nous déplorons le manque de données statistiques fiables relatives aux Roumains qui prennent la décision de rester pour une période de leur vie à l'étranger, s'ils sont forcés par la situation économique précaire ou poussés par l'ambition de se réaliser en quittant un pays qui ne leur offre aucune possibilité de s'épanouir, de développer leur savoir-faire, leur savoir ou leur génie à des fins altruistes et sociétales. Anna Ferro dans son étude les Roumains à l'étranger a la vision la plus correcte et la mieux vérifiée, à notre avis, par rapport à cet aspect de la migration d'une main d'œuvre hautement qualifiée, à savoir chercheurs, masterants ou doctorants : « Ce n'est pas le travail en soi qui m'a poussé à émigrer, mais la combinaison de la possibilité d'une meilleure vie à l'étranger avec de plus intéressantes perspectives d'emploi et une qualité de vie que je ne pourrais pas trouver en Roumanie » (Ferro, 2004: 96).

Elle circonscrit cette migration entre le recrutement à l'étranger comme seule possibilité de carrière, la remise de fonds pour les familles restées en Roumanie (80 pour cent des émigrés en envoi) et le retour dans un milieu de travail «déprimant» qui gaspille les cerveaux, le capital professionnel acquis à l'étranger sans en profiter aucunement.

D'autre part, nous constatons un grand changement des objectifs des migrants après 2007 : ils ne s'intéressent plus au tourisme culturel, au plaisir de se promener, de voir et connaître d'autres cultures, d'acquérir du savoir-faire et de la compétence professionnelle, mais les jeunes instruits après 2007 sont intéressés par l'argent, ils sont pragmatiques et mercantiles, ils n'ont plus la pudeur de l'argent et du capital. La nouvelle vague est apparue sur le marché du travail.

Dans les programmes d'échanges pour les étudiants comme Erasmus, ils demandent des allocations plus grandes ou refusent les trop petites en récompense de leur travail, ils acceptent de partir à l'étranger seulement parce qu'ils ont des parents qui y travaillent et peuvent faciliter leurs conditions de vie et leur permettre d'épargner de l'argent ou mieux encore s'ils y retrouvent un petit ami ou un/une autre de nouveau/nouvelle, récemment « connu/e » sur les réseaux de socialisation dont ils sont dépendants.

### **3. L'Actualité de la migration**

Elle s'identifie avec les transformations très rapides qui ont caractérisé la dernière décennie. Au gouvernement libéral de Tăriceanu et à l'Alliance Dreptate-Adevăr (Justesse - Vérité) a succédé le gouvernement de Boc, contesté et réinvesti quatre fois par le président Băsescu. Tăriceanu a eu une politique d'encouragement du retour des diplômés des hautes écoles réputées (universités américaines surtout et européennes aussi). Comme il était un continuateur d'Emil Constantinescu qui se vantait d'être soutenu par 15 000 intellectuels et qui s'en est retrouvé seul après certains compromis politiques (soutien des Cossovares contre les Serbes, engagement de troupes sous l'oripeau de l'OTAN), Tăriceanu a fondé 224 agences et régies gouvernementales où il a embauché de jeunes intellectuels formés en Occident, avec des salaires au même niveau, une nouvelle classe de yuppies et lèche-bottes qui ne se laissent plus renverser de leur position privilégiée. Quant au président Băsescu, il s'est toujours positionné contre les intellectuels : à la foire du livre « Bookfest », en 2009, accueilli par le philosophe Gabriel Liiceanu, le directeur de la maison d'édition « Humanitas », ancienne « Editura Politică », il a exprimé une opinion gênante sur la capacité de l'école roumaine à « préparer des stupides, pardon des philosophes - au lieu de produire des ferblantiers, des mécaniciens et des serveurs dont nous en avons vraiment besoin ». Après sa réélection il a dû reconnaître l'existence de la crise et la nécessité de prendre des mesures exagérées contre toute la population : diminution des salaires, imposition de toutes les pensions de retraite et autres mesures impopulaires pour le bas de la hiérarchie. Il a invité les jeunes diplômés à quitter la Roumanie pour se réaliser ailleurs et, de la sorte, aider leur pays :

«Nous devons réformer l'éducation parce qu'elle produit des chômeurs académiciens : trop de philosophes, trop peu d'ingénieurs et ceux qui s'y trouvent n'ont pas les qualifications recherchées» dit-il dans une interview dans le quotidien *Frankfurter Allgemeine Zeitung* (in Leca, 2011) pour signaler l'inadvertance du système au marché.

#### 4. Hypothèses

L'élite technique créée par les communistes pendant la dictature du développement était partie après 1989 à cause de la désindustrialisation forcée. 85% de la population de la Roumanie était pro occidentale traditionnellement: l'élite intellectuelle, les catholiques et les unitariens, les Juifs, les Allemands, les Hongrois et aussi les paysans dépossédés de leurs terres et obligés de travailler au Canal. Par conséquent une hémorragie de la main d'œuvre existait déjà avant l'exhortation du président, l'intellectualité roumaine était déjà en dérive et nous supposons que la jeunesse intellectuelle continue ce processus.

Dans cette recherche, nous sommes parties de l'idée que les étudiants de notre faculté voulaient étudier à l'étranger pour pouvoir y rester et occuper un emploi mieux payé qu'en Roumanie, influencés par les mentalités de leurs parents et confiants dans le mythe du bien-être occidental. Nous avons présupposé que l'étude des langues modernes facilite et favorise leur départ. La maîtrise d'une langue étrangère peut atténuer le choc culturel d'un émigrant et faciliter son insertion dans une société étrangère.

Notre corpus d'étude est basé sur les réponses de 115 étudiants de notre faculté (Faculté d'Economie et d'Administration des Affaires de l'Université de l'Ouest de Timișoara, Roumanie) au questionnaire distribué le 27 avril 2012 et comprenant les rubriques suivantes : la section des données sur le profil du répondant (année d'étude, spécialisation, sexe, âge, milieu) ; la section des opinions sur l'enseignement universitaire et sur les perspectives d'évolution professionnelle ; la section sur les compétences linguistiques.

La plupart des sujets proviennent de la première (56 étudiants – 48,7 %) et de la deuxième année d'étude (44 étudiants – 38,26 %), tandis que la troisième année est moins représentée (15 étudiants – 13,04 %). Nous avons envisagé toutes les spécialisations de notre faculté (comptabilité et gestion, tourisme et services, finances banques, management, marketing, relations économiques internationales, etc.). Les réponses nous ont permis de constater encore une fois que le nombre de jeunes filles est plus grand que celui de jeunes garçons (64,35 % par rapport à 35,65 %) et que les étudiants qui proviennent du milieu urbain (75,66 %) sont beaucoup plus nombreux que ceux qui proviennent du milieu rural (24,34 %). Leur âge est de 19 à 23 ans.

La deuxième section du questionnaire nous a permis de connaître les opinions des étudiants sur les principaux aspects de notre démarche didactique. Nous pouvons constater ainsi un pourcentage de « culpabilité » pour leur départ. La sixième question les interroge sur la satisfaction que les études leur offrent à partir du qualificatif « très content » jusqu'au qualificatif « très mécontent ». En général ils sont contents ou très contents des connaissances théoriques, de la dotation matérielle et IT de notre faculté, de l'adaptation des programmes d'études aux exigences actuelles. Leur mécontentement est lié surtout aux habiletés pratiques acquises pendant leurs études. On a souvent reproché à l'enseignement roumain son caractère trop théorique et, selon les réponses de nos étudiants, il semble que les choses n'ont pas trop changé. Dans une faculté d'administration des affaires les étudiants s'attendent à acquérir plus d'expérience dans le domaine que de connaissances théoriques.

La septième question propose une comparaison entre l'enseignement universitaire roumain et les systèmes occidentaux compte tenu du fait que, même s'ils n'ont pas encore étudié à l'étranger, nos étudiants connaissent les autres offres dans le

domaine car l'Internet les a aidés à se renseigner. La simple comparaison entre plusieurs systèmes d'enseignement universitaire explique la différence entre les réponses à la sixième et les réponses à la septième question où le nombre de ceux qui sont contents et très contents de l'enseignement roumain baisse (26,08 % et 5,22 %) et augmente celui des « indifférents » (25,22 %) et des « mécontents » (20,87 %). Il est à mentionner aussi le nombre assez important de ceux qui n'ont pas répondu à la sixième (22,6 %) et à la septième question (22,6 %) malgré la confidentialité des réponses. Probablement il s'agit du désir ou de la peur de ne pas vexer les professeurs.

Conformément aux réponses à la huitième question, la plupart des étudiants préféreraient faire des études de master à l'étranger (56,52 %) tandis que ceux qui ont opté pour la licence à l'étranger sont moins nombreux (24,35 %) et encore moins nombreux ceux qui aimeraient faire leur doctorat à l'étranger. Dans les discussions que nous avons eues avec nos étudiants, ils ont justifié cette option en disant qu'ils voudraient être plus âgés lors de leur départ à l'étranger et que le master leur laisse plus de temps pour travailler et pour gagner assez d'argent afin de ne pas solliciter l'aide de leurs parents. Le nombre assez réduit de ceux qui ont opté pour le doctorat est lié au fait qu'il y a peu d'étudiants qui veulent faire des études doctorales, qu'ils préfèrent plutôt travailler qu'étudier.

Le nombre de réponses à la neuvième question a constitué une surprise car le pourcentage de ceux qui veulent rester à l'étranger à la fin de leurs études n'est pas beaucoup plus grand que celui de ceux qui veulent revenir en Roumanie : 49,56 % par rapport à 42,6 %. En ce qui concerne les justifications qu'ils ont formulées, la première place est occupée par le niveau de vie plus élevé (19,13%) suivi des opportunités professionnelles (16,52 %) et de la reconnaissance de la valeur individuelle (13,89 %). Il y en a d'autres qui parlent du niveau plus réduit de corruption, des possibilités de développement sur le plan professionnel ou de l'appréciation de l'employeur. Pour ceux qui envisagent la possibilité de revenir, les justifications sont d'ordre économique (opportunités plus nombreuses de lancer une affaire, le potentiel économique de la Roumanie en tant que pays en voie de développement, la mise en pratique des compétences acquises à l'étranger), mais aussi sentimental (les amis et la famille, le désir de changer quelque chose dans la société roumaine et même le patriotisme, un argument – surprise quand il s'agit de la jeune génération qui est plutôt cosmopolite).

Le pourcentage de ceux qui se déclarent « adaptables » à la vie dans une autre culture est presque égal au pourcentage de ceux qui veulent rester à l'étranger (59,13) et à ceux-ci s'ajoutent ceux qui se déclarent « très adaptables » (10,43%). Personne ne se déclare « très inadaptable » et très peu sont ceux qui se reconnaissent « inadaptables » (4,35%). Ces réponses montrent que grand nombre de nos étudiants seraient capables de s'adapter à une autre culture et pourraient vivre à l'étranger. D'ailleurs dans les programmes de mobilités internationales il y a eu très peu d'étudiants qui n'ont pas pu s'adapter à un nouveau style de vie et se sont déclarés incapables de répondre aux exigences des universités étrangères.

La onzième question est la plus importante dans l'économie de notre communication parce qu'elle donne les raisons du retour en Roumanie après les études dans d'autres pays. Elle nous offre à nous, enseignants, les enjeux et les directions d'action pour convaincre les étudiants de revenir pour utiliser leur savoir-faire dans l'environnement économique roumain. Ils sont les contribuables qui payeront les impôts et les taxes ainsi que les pensions de retraite parce que notre système

d'enseignement les a formés et a investi dans leur formation initiale. Dans la première période après 89 nous avons eu un grand nombre d'informaticiens dont presque tous quittaient le pays et les décideurs ont envisagé d'augmenter le nombre d'étudiants en IT juste pour en exporter. Mais l'investissement était trop grand par rapport aux bénéfices et le facteur surprise a été le patriotisme qui revient ces dernières années. Les jeunes gens apprécient les efforts de leurs parents, aiment leurs familles, les coutumes locales, la musique de la jeunesse et les danses redeviennent roumaines et le patriotisme démonétisé par l'excès communiste revient en force et reconquiert parce qu'il n'est plus imposé. On diffuse des CD en roumain avec des chansons patriotiques.

Le problème du salaire est considéré très important par 27,82%, important par 44,38% et neutre par 13,91% et les rubriques «peu important» et «sans importance» n'ont pas de répondants, ce qui reflète l'intérêt accru pour l'argent, justifié par la pauvreté quasi générale de nos étudiants. Ils travaillent à temps plein pour payer leurs études et leur vie et ont parfois plusieurs emplois parce qu'ils sont mal payés et n'arrivent pas à pourvoir à leurs besoins. Ils seront déjà fatigués avant d'entrer sur le marché du travail.

L'acquisition de nouvelles connaissances de spécialité selon le profil professionnel est considérée très importante par 22,6 %, importante par 38,26 %, ce qui dépasse la moitié des répondants, mais elle est considérée indifférente par 17,39 % et peu importante par 12,17 %, soit 29,56 % – un tiers – qui n'accordent plus de l'importance à la qualité des connaissances, du savoir professionnel dispensé dans le milieu universitaire. On peut présumer qu'ils n'ont plus confiance à la justesse de l'évaluation et de la prise en compte du critère par l'environnement socio-économique où les patrons et les employeurs ont des évaluations plutôt subjectives et le « capital social » s'avère plus important que le savoir professionnel.

La vérification de cette affirmation se fait par les réponses au troisième critère, à savoir le gain de respect proportionnellement aux connaissances acquises et aux valeurs promues. 31,3 % constatent que le critère est très important, 33,04 % croient qu'il est important (64,34 %) tandis que 15,65 % le trouvent indifférent et 10,43 %, peu important (soit 26,18 %). Un quart des répondants manifestent du cynisme et nous tirons cette conclusion parce que dans la rubrique où l'on demande de proposer d'autres critères, ils ne proposent rien, donc ils n'ont pas d'autres valeurs alternatives.

Le développement des perspectives d'évolution professionnelle se rapproche des deux derniers critères par les résultats : « très important » 29,56 %, « important » 34,78 % (un total de 64,34% d'optimistes qui ont confiance dans l'évolution de leur carrière professionnelle dans notre pays). La Roumanie reprendra la croissance économique et offrira plus de conditions de développement que tout autre pays occidental parce qu'ici tout est à faire. Les «indifférents» (13,04 %) et ceux qui ne répondent pas (22,6 %) ne croient pas à leur évolution professionnelle en Roumanie et acceptent n'importe quel emploi pourvu qu'ils touchent au moins le SMIC.

Le dernier aspect évalué, celui des facilités (logement, voiture, téléphone, ordinateur, etc.) assurées aux jeunes diplômés par les employeurs est apprécié par une majorité de 65,48 % (26,95 % «très important» et 39,13 % «important») des répondants, ce qui vérifie le manque de moyens matériels. Pour ces jeunes un logement est un rêve inaccessible vu les prix dans l'immobilier et le niveau des salaires. La voiture accessible au diplômé est «second hand». Même un portable plus cher et plus performant est peu accessible pour lui. Il n'y a que 16,52 % des

sujets qui se déclarent «indifférents» et 13,04 % qui considèrent ce critère «peu important» parce que ce type de facilités ne concerne pas leur emploi ou mieux, ils les possèdent déjà.

Les trois dernières questions (12. Mentionnez la langue moderne étudiée à la faculté, 13. Quelles autres langues étrangères connaissez-vous ? et 14. Quelle est votre langue maternelle ?) nous ont permis de constater que les répondants qui étudient l'anglais à la faculté (58,26%) sont plus nombreux que ceux qui étudient le français (23,48%) ou l'allemand (16,52%). La plupart des sujets ont déclaré qu'ils parlent au moins deux langues étrangères, principalement l'anglais et le français, mais aussi l'allemand, l'espagnol, l'italien et le hongrois. Selon les résultats aux questions 12 et 13, nous avons constaté que, du point de vue linguistique, au moins, nos étudiants sont facilement adaptables à la vie dans un autre pays, qu'ils sont capables de communiquer avec les autres citoyens de l'Europe. Les réponses à la dernière question reflètent la composition ethnique de la population de notre région (87,82% Roumains, 4,35% Magyars, 1,74% Allemands et 3,48% Serbes). Il est à remarquer que l'ethnie ne joue aucun rôle dans les options exprimées par nos étudiants et que leur mécontentement a les mêmes causes.

## 5. Conclusions

Tous ces résultats montrent que notre université doit continuer de développer le côté pratique de ses activités et qu'elle doit encourager les programmes par lesquels ce stage est payé (PRAXIS et PracTeam sont les deux programmes implantés dans notre faculté). Depuis deux ans on a trouvé des banques surtout, mais aussi d'autres entreprises (en fonction de la spécialisation des étudiants) qui reçoivent de la part de l'Etat les fonds nécessaires pour payer les stages. On a enfin compris que le stage n'était pas une simple formalité, comme avant l'introduction des programmes susmentionnés, qu'il avait une contribution importante à la formation des étudiants de notre faculté.

Une autre mesure qui pourrait encourager les étudiants à retourner dans leur pays serait la création d'emplois dans notre institution. Ainsi gagneront-ils l'argent nécessaire et l'expérience exigée par les employeurs : de la cafétéria à la bibliothèque on pourrait réserver tous les emplois aux étudiants.

Ces mesures proposées à l'intérieur de notre faculté doivent être réglées et soutenues par l'élaboration des normes d'application des lois, car les lois, elles existent déjà. Il faut dépasser la dictature actuelle des administrations incapables de créer des emplois pour les jeunes et de les motiver à rester en Roumanie.

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**SECTION: ECONOMICS, BUSINESS ADMINISTRATION,  
TOURISM AND ECONOMIC STATISTICS**

***SUB-SECTION: ECONOMICS***



# DYNAMICS OF CHANGES IN ROMANIA KNOWLEDGE ECONOMY

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**Abstract:** *By joining the European Union, the new member states have benefited from more opportunities for interaction and knowledge transfer, which boosted the transition to the knowledge economy. This paper deals with three areas that are the drivers of KE, education, research-development-innovation and information for a selection of European countries, which are the new EU member states (NMS). It focuses on identifying the current state of growth performance in Romanian economy in relation to some of the relevant KE indicators, the main tendencies manifested in the last years and their contribution to the KE development within the EU's developing countries group. The findings of the research reveal that the Romanian economy performance in KE terms has registered a positive dynamism, but this country is not on the efficiency frontier yet, being closer rather to the middle level of development from the new EU member states.*

**Keywords:** *Data envelopment Analysis, Knowledge economy, Economic growth, Economic performance*

**JEL classification:** *I25; O11*

## 1. Introduction

Over the last years, the economic growth in Europe has been reduced with some noticeable differences of competitiveness compared to other regions of the world (Nijkamp and Siedschlag, 2011). In order to surpass this situation, the Lisbon Strategy (2000) recommended to the EU countries to create a stimulating framework based on knowledge and innovation aimed at improvement of competitiveness and economic growth, and at enabling the transition to knowledge-based economies.

Countries that later joined the EU including Romania have adopted the European economic-social model of development and strived to approach the features of advanced countries, in which the Knowledge Economy (KE) is already a reality.

This paper has as objective to analyze the progress made by Romania to develop an economy based on knowledge. In a Knowledge Economy the economic growth is closely linked to knowledge production and its utilisation with higher efficiency in the entire society (Karagiannis, 2007).

The study aims to answer some questions, such as: What is the present stage of KE within the countries that joined the EU later? What are the trends related to the specific areas of KE in these countries and in Romania?

For answering these questions, the research is carried out in the following stages: selection of main specific indicators for domains related to the KE in EU's NMS (importance, availability of data, statistic significance); assessment of KE pillars performance in each country of the group and on the assembly; comparative analysis of the efficiency scores for KE pillars in Romania in comparison to countries which are on the efficiency frontier and to the average score of the overall selected countries.

The research method used is Data Envelopment Analysis (DEA). For selected countries, the efficiency analysis models depending on education, research-development and ICT (information and communication technologies) have been estimated. These components are considered the key factors to boost the economic growth in KE terms. The efficiency frontier identified allows appreciating the relative performance gaps between each country and the group leaders, and formulating some future action directions.

For Romania, the results indicate a greater contribution to growth of the KE drivers compared to the moment of accession. But the relative performance of each KE component is low.

Reducing development gaps between the country and the other EU members, and accelerating the transition to knowledge economy will only be possible by implementing some coherent policies to stimulate especially innovation and investments in human capital.

## **2. Literature review**

After the middle of the twentieth century the growth theories considered that long-run economic growth could not be explained only by the capital accumulation. Arrow (1962) introduced the idea that through learning, labour force can accumulate experience, increase productivity and accelerate the economic growth. The studies of Romer (1986) and Lucas (1988) also pointed out the prominent role of human capital, and that a stable growth rate can result by accumulation of knowledge. More recently literature has analyzed the knowledge based economy pattern. In this economy, knowledge is regarded as main element of development process, ensuring high economic growth and opportunities for social progress (Chen and Dahlman, 2005).

The studies performed by the World Bank reveal that a strong relationship exists between knowledge accumulation and economic development. The higher the knowledge stock is (measured by Knowledge Economy Index), the greater the level of the countries' economic development is (World Bank, 2012a).

The Lisbon Strategy stated that the Knowledge-based Economy should be the priority direction for progress and economic development in Europe. Stimulating the knowledge creation and utilization in every domain aimed for Europe to improve the economic, social and environmental performance in the next decade, in order to transform in the most competitive region in the world with a sustainable economic development.

Changing an economy into a Knowledge-based economy requires some actions, such as radical transformation of Information and Communication Technologies system, enhancing the research and development sector, increasing of the competitiveness, consumption and incomes, orientation to quality (Coates and Warwick, 1999).

Recent studies concerning the world's regions or countries, analyzed the Knowledge-based Economy according to elements such as R&D effort, quality of human resources, innovation capacity, IT diffusion, access to finance and information society (Karagianis, 2007), sustained investments in education, innovation, information and communication technologies, and a conducive economic and institutional environment ((Chen and Dahlman, 2005), human capital, innovation ability, information access (Nijkamp and Siedschlag, 2011), industry R&D, venture capital, workforce education, fast growth firms (Watkins, 2008), knowledge workers

(ICT sensitivity, educational level, creative class and communicative skills), R&D and innovativeness (Westeren, 2012).

To create an unique framework and ease the evaluation of a country's progress towards the Knowledge Economy, the World Bank has developed the Knowledge Assessment Methodology (Chen and Dahlman, 2005; World Bank, 2012a). According to it, the countries' readiness for the Knowledge Economy is appreciated based on numerous indicators which are synthesised by four pillars: economic and institutional regime, education and skills of population, information infrastructure and innovation system.

Also, in Romanian specific literature the interest for Knowledge Economy is perceived. The studies concern various theoretical aspects related to KE and its perception by companies (Ceptureanu et al., 2012), assessment of ICT indicators contribution to KE using World Bank methodology (Goschin and Constantin, 2007), constrains in innovation implementation (Brătianu and Vasilache, 2009), relation with sustainable development etc. This present study intends to evaluate the advances of Romanian economy towards KE after joining the EU, in a comparative manner against the other developing countries of the European Union using a nonparametric method. The advantage of this approach is that one can have a synthesis picture of how effective the country uses its internal resources to generate knowledge and economic value.

### 3. Methodology

In this study, the performance and trends assessment of the KE drivers is performed using Data Envelopment Analysis (DEA) approach. DEA is a nonparametric method by which a linear programming model is built based on some empirical outputs and inputs for a number of decisional units.

Resolving the model leads to identification of an efficiency frontier on which the most performing states are positioned (efficiency score is 1), all the other countries that have efficiency score less than 1 being considered inefficient. The performance scores obtained allow both ranking of the decisional units (countries) according to their relative individual performance, which depends on the conditions and variables specified, as well as pointing out the ways to increase efficiency.

In this paper, the CRS (constant returns to scale) output oriented model proposed by Charnes, Cooper, and Rhodes (1978) and the ratio form of data as suggested by Coelli et al. (2005) were used. This model considers  $k$  decisional units, each of them with  $n$  inputs and  $m$  outputs.

The efficiency for the decisional unit  $k$  is as follows:

$$E_k = \frac{\sum_{j=1}^m v_j y_{kj}}{\sum_{i=1}^n u_i x_{ki}} \quad \text{s.t.} \quad \frac{\sum_{j=1}^m v_j y_{kj}}{\sum_{i=1}^n u_i x_{ki}} \leq 1 \quad ; \quad \forall u_i, v_i \geq 0$$

in which:  $u_i$  represent weights of inputs;  $v_j$  represent weights of outputs variables.

Data are for period 2007-2011 and aim the main aspects of production, use and dissemination of knowledge in the new EU member states: Czech Republic (CZ), Estonia (EE), Cyprus (CY), Latvia (LV), Lithuania (LT), Hungary (HU), Malta (MT), Poland (PL), Slovenia (SL), Slovakia (SK), Bulgaria (BG) and Romania (RO).

In order to analyze their possible economic growth driven by knowledge capacity, indicators were used from domains known as key sources for boosting development, namely human capacity, innovation ability and information access (Nijkamp and Siedschlag, 2011; World Bank, 2012a). The representative indicators have been selected according to the results of some previous researches concerning the determinant factors of economies based on knowledge and provided by the EU statistics: "Education and training", "Science, technology and innovation" and "Information society". The "Gross Domestic Product at market prices per capita" (GDP) was used to appreciate the economic performance because its level expresses the returns from investments in knowledge factors made by a country.

#### 4. Results and discussions

The assessment of challenges in Romania Knowledge Economy was performed with Data Envelopment Analysis techniques considering the three pillars that can stimulate growth and development. To identify the country's progresses to an economy based on knowledge, comparisons with the other new EU member states have been made for two time periods, namely 2007 (when Romania joined the EU) and 2010 (most recent year with complete information in databases).

A). The education system has a major contribution to the increase of the stock of global knowledge by which a country can more rapidly advance towards KE. The indicators used to evaluate the impact of education on KE were selected according to their potential to boost the innovation process and knowledge transfer (Table 1).

**Table 1:** Indicators of knowledge economy on education

Country	GDP per inhabitant		Participation rates in education, %		GMST per 1000		Public expenditure on education	
	2007	2010	2007	2010	2007	2010	2007	2009
BG	10000	10700	52.4	53.7	8.4	11.4	9.77	11.26
CZ	20700	19500	62.1	62.7	12.0	16.5	9.88	9.76
EE	17500	15500	62.1	62.1	13.3	11.3	13.88	13.46
CY	23600	23600	41.2	47.6	4.2	5.1	16.81	17.26
LV	14300	13200	62.5	61.1	9.2	10.7	13.98	12.77
LT	15500	14900	68.7	69.3	18.1	18.7	13.39	12.88
HU	15400	15900	63.7	65.6	6.4	8.3	10.44	9.96
MT	19500	21000	44.5	47.2	7.1	8.0	14.79	12.56
PL	13600	15300	70.3	70.8	13.9	15.8	11.65	11.45
RO	10400	11400	53.6	56.1	11.9	15.6	11.11	10.31
SL	22100	20500	70.1	71.0	9.8	14.8	12.15	11.57
SK	16900	17900	56.3	58.1	11.9	18.3	10.59	9.85

Source: Eurostat database

Indicators from Table 1 contain some empirical observations of outputs and inputs for the envelopment problem solved by DEA technique. The output is represented

by the indicator „GDP at market price, PPS per inhabitant” and inputs are the variables: „Participation rates in education (students aged 15-24 years as % of corresponding age population)”, „Graduates in mathematics, science and technology per 1000 of population aged 20-29 years” (GMST) and „Total public expenditure on education as % of total public expenditure, for all levels of education combined”. Although there are other important indicators in knowledge creation and dissemination (i.e. language learning), the missing data for some countries has led to restriction of the number of indicators used in analysis.

The model was solved in CRS version and output-oriented version and the results obtained are in Table 2.

**Table 2:** DEA results. Economic performance of KE on education

Country	2007		Country	2010	
	Performance score	Position		Performance score	Position
CZ	1.000	ef.	CZ	1.000	ef.
CY	1.000	ef.	CY	1.000	ef.
SL	1.000	ef.	MT	1.000	ef.
HU	0.881	inef.	SV	0.947	inef.
MT	0.876	inef.	SK	0.940	inef.
SK	0.831	inef.	HU	0.921	inef.
EE	0.713	inef.	PL	0.703	inef.
LT	0.613	inef.	EE	0.664	inef.
LV	0.601	inef.	LT	0.619	inef.
PL	0.569	inef.	LV	0.596	inef.
BG	0.554	inef.	RO	0.589	inef.
RO	0.511	inef.	BG	0.531	inef.
Mean	0.762	-	Mean	0.792	-

Source: DEAP soft

Czech Republic, Cyprus and Malta are countries that took advantage of education system in growth. Romania presented a positive trend of its relative efficiency score (4%) but this is still reduced in comparison to the scores of group leaders and even to the average level of the indicator, being classified as inefficient. The study of the indicators (Table 1) to determine the performance of the education system highlighted that there are not major differences of indicators in Romania against the countries on the efficiency frontier. In Romania (2010), the number of persons enrolled in secondary and tertiary education (15-24 years) is higher with 18% than of Cyprus and Malta. Graduates from the mathematics, science and technology fields are 3 times numerous than in Cyprus and 2 times more than of Malta. Also, the levels of these indicators are closely to those of Czech Republic. However, the Romanian education system has 41% lower efficiency than that of the other countries, meaning that its labour force did not sufficiently contribute to value creation within the economy.

One of the causes for which the knowledge acquired in schools did not have the expected effects in Romania’s economic growth is unbalanced situation between knowledge and labour market demands. In Romania in 2009, the share of registered unemployed people under 29 years in the total unemployed persons was 24.2%

(N.I.S., p.114, 2010). Another cause for lower contribution of knowledge acquired by young people to the GDP formation is the phenomenon of their emigration to other countries. Thereby at the end of 2009, of the total persons who settled their permanent residence abroad, about 25.3% were under 25 years, and 52.3% of emigrants were 26-40 years (N.I.S., p. 79, 2010).

B). For determining the contribution of R&D factors to a better preparation for transitioning to Knowledge Economy for the EU new member states including Romania, the GDP (v. Table 2) and the indicators presented in Table 3 have been considered.

In the second DEA problem, the relevant inputs for identifying the technical and economic development potential of business environment are: „Business enterprise R&D expenditure”, „Human resources in science and technology” (25-64 years, % of active population) and “Enterprises with innovation activity” (product, process, ongoing or abandoned, organizational and marketing innovation), and output variable is GDP per inhabitant.

**Table 3:** Indicators of Knowledge Economy on research-development

Country	Business enterprise R&D expenditure, % of GDP		Human Resources in Science and Technology, %		Enterprises with innovation activity %	
	2007	2010	2007	2010	2008	2010
BG	0.14	0.3	30.8	31.6	0.3077	0.2711
CZ	0.92	0.96	36.0	37.8	0.56	0.5169
EE	0.51	0.82	44.4	45.0	0.5638	0.5684
CY	0.10	0.09	42.5	43.9	0.5611	0.4619
LV	0.19	0.22	37.2	37.8	0.2429	0.2986
LT	0.23	0.23	40.6	42.7	0.3028	0.3446
HU	0.49	0.7	31.7	33.0	0.2894	0.3106
MT	0.38	0.42	31.9	31.9	0.3741	0.4154
PL	0.17	0.2	32.5	36.3	0.2794	0.2814
RO	0.22	0.18	23.0	24.4	0.3331	0.3082
SL	0.87	1.42	38.9	40.8	0.5028	0.4940
SK	0.18	0.27	31.8	33.5	0.3605	0.3559

Source: Eurostat database

The comparison between countries in terms of their relative performance of their R&D system towards KE identified for 2010 Cyprus, Malta and Poland on the efficiency frontier (Table 4). All the other countries had in comparison to them a lower efficiency of the research and innovation process.

Romania had an relative efficiency score with 21.5% lower than the group leaders, situation which can be explained by the existence of a more reduce capacity to produce and apply innovative knowledge, therefore this direction seems to be a reserve to increase the performance. In the world ranking on economies competitiveness made by the World Economic Forum, Romania also has a low score for the innovative capacity (3.2 on 1 to 7 scale) (Schwab, 2012).

**Table 4:** DEA results. Economic performance of KE on research-development

Country	2007		Country	2010	
	Perform. score	Position		Perform. score	Position
CY	1.000	ef.	CY	1.000	ef.
MT	1.000	ef.	MT	1.000	ef.
SK	1.000	ef.	PL	1.000	ef.
LV	0.951	inef.	HU	0.974	inef.
CZ	0.941	inef.	SK	0.967	inef.
HU	0.817	inef.	SL	0.826	inef.
RO	0.757	inef.	LV	0.810	inef.
PL	0.750	inef.	LT	0.808	inef.
LV	0.699	inef.	RO	0.785	inef.
LT	0.686	inef.	CZ	0.784	inef.
EE	0.647	inef.	BG	0.740	inef.
BG	0.581	inef.	EE	0,541	inef.
Mean	0.819	-	Mean	0.853	-

Source: DEAP soft

C). The analysis of the impact of information and communication technologies on economic growth used some indicators related to the information infrastructure utilized in enterprises activity, and the extent of its financing (Table 5).

**Table 5:** Indicators of Knowledge Economy on ICT, EU's NMS, 2007-2010

Country	Enterprises having Internet access, %		Enterprises using computers, %		Information Technology expenditure, % of GDP	
	2007	2010	2007	2010	2007	2010
BG	75	85	85	90	1,0	1,7
CZ	95	95	97	96	2,2	2,2
EE	94	96	95	97	1,4	1,4
CY	88	88	95	92	-	-
LV	86	91	95	95	1,1	1,1
LT	89	96	91	97	1,1	1,2
HU	86	90	91	91	1,7	1,8
MT	95	94	97	96	-	-
PL	92	96	95	97	1,7	1,7
RO	67	79	82	82	1,1	1,2
SL	96	97	98	98	1,6	2,0
SK	98	98	99	98	2,0	1,9

Source: Eurostat database

The hierarchy of the EU's developing countries according to the efficiency of information indicators provided by DEA is presented in Table 6.

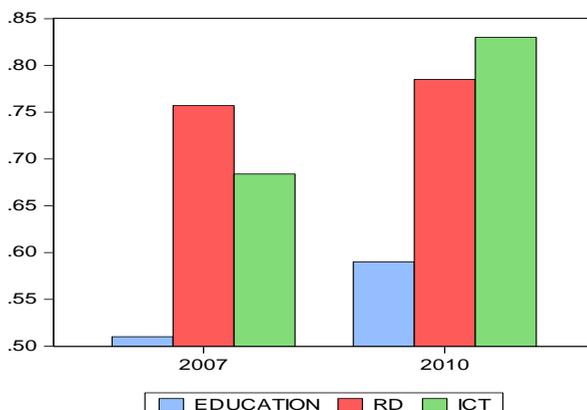
**Table 6:** DEA results. Economic performance of KE on ICT

Country	2007		Country	2010	
	Perform. score	Position		Perform. score	Position
LT	1.000	ef.	LT	1.000	ef.
SL	1.000	ef.	SL	1.000	ef.
CZ	0.947	inef.	CZ	0.971	inef.
LV	0.925	inef.	LV	0.966	inef.
EE	0.899	inef.	EE	0.952	inef.
HU	0.778	inef.	SK	0.904	inef.
SK	0.757	inef.	HU	0.853	inef.
BG	0.714	inef.	PL	0.833	inef.
RO	0.684	inef.	RO	0.830	inef.
PO	0.642	inef.	BG	0.608	inef.
Mean	0.835	-	Mean	0.892	-

Source: DEAP soft

The assessment of developing countries based on the efficiency of their ICT sector recorded in 2010, ranked Romania on the second last place in the group of 12 states, with a relative score of 0.83. In the hierarchy made by the World Economic Forum based on the Networked Readiness Index 2012, it was ranked 67<sup>th</sup> out of 142 countries with a score of 3.9 (1 to 7 scale); among the EU countries it ranked ahead only of Bulgaria (Dutta and Bilbao-Osorio, 2012).

Although, the ICT has increased the contribution to economic growth with 14.6% compared to 2007, Romania, with an efficiency score lower with 17% than Lithuania and Slovenia, is still below the average level of efficiency in the group of EU's NMS.



**Figure 1:** Evolution of relative performances of KE drivers in Romania

According to Figure 1, in Romania there was an improvement of the performance score of the education system with about 8%, but it is much lower than the average level of new EU member states. In this sector, some adequate strategies for increasing the share of enrolments in education, stimulating professional training for high-tech activities and better financing are required.

The efficiency trend of resources used for knowledge creation and utilization by R&D sector was also positive, but its relative increase was higher only with 3% in comparison with the accession year. In order to reduce the performance gap against other countries, the rhythm of innovation should be intensified. This action implies more investments in research-development activities, increasing the share of labour force that works in this area and extending application of research results in production. There are some consistent results from investments in information infrastructure, which contributed to the increase of performance with 14.6%. Extending the ICT technologies within enterprises allowed knowledge dissemination and utilisation on a large scale and a higher contribution to value creation in the national economy. For the future, development of the information society will remain an important direction to stimulate the economy based on knowledge.

Results of the analysis undertaken are consistent with recommendations made by the World Bank. In Romania, in order to accelerate the participation of knowledge disadvantaged communities in the Knowledge-based Economy, it is necessary to develop areas such as education, innovation support for enterprises, businesses and public communications with the Government, the financial self-services, e-commerce (World Bank, 2012b).

## **5. Conclusions**

Among the countries that later joined the EU, there are some disparities in utilisation of the resources that are specific to the Knowledge Economy. The Data Envelopment Analysis technique has been applied to determine the efficiency of educational factors, elements of R&D, and ICT factors in correlation to the GDP, and the relative performance scores for each KE pillars were obtained. The efficiency frontier separates the analyzed countries in two groups: efficient countries – those with maximum performance scores and inefficient countries – other countries, which have lower scores than efficient ones. For all of the pillars Romania belongs to the group of inefficient countries.

Due to the differences of economic growth between Romania and the other new EU member states, it ranked in a modest position, with important implications for the quality of population's life. However, compared to the moment of accession, Romania has registered some progresses in KE terms.

The area where less progress has been made compared to other countries is education. Although at the national level, educational factors contributing to the GDP increased significantly, in relative terms their performance remains quite low and somehow, justified. The structural changes of economy caused by the accession in the EU led to emergence of some uncontrollable phenomena (migration of population being only one of them), the economic effects of investments in people not being present in totality in the country. Another cause is insufficient funding of the sector infrastructure.

Increasing the competitiveness and dynamism of the Romanian economy requires effective policies to be designed. They should address the measures of increasing the internal resource performance, especially in areas that can generate knowledge and innovation, and should continue to benefit from the ICT growth potential.

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# EXTERNAL FACTORS FOR THE MONETARY POLICY TRANSMISSION MECHANISM

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**Abstract:** *This paper reviews and analyzes the effects that external (or exogenous) factors, defined as economic factors that cannot be controlled or influenced by the central bank, have on monetary policy and the monetary policy transmission mechanism. Adopting a theoretical research position, we aim at identifying the main external factors to monetary policy and discuss the ways in which these factors alter the economic environment and implicitly the monetary policy transmission mechanism. This is done by changing the way in which monetary transmission channels work and deliver monetary policy decisions throughout the economy, with the final goal of producing central bank desired outcomes with regard to economic variables like inflation, employment, or the production level. We will begin this article with a brief introduction on the topic of monetary policy, the monetary policy transmission mechanism and the potential external factors that may influence the monetary policy and the functioning of its transmission mechanism. The main external factors are identified as linked to fiscal policy, commodity prices, financial market volatility or other globalization related processes. After this introduction, we will proceed with the analysis of the nature and influences of each of the above mentioned external factors on monetary policy and its transmission, identifying the potential ways in which they can change the structure and internal processes of the transmission channels. As we will see in the study and highlight in our conclusion, the external factors cause decisive changes in the way monetary policy is transmitted, and thus will strongly influence the decisions that central banks take in order to alter key economic variables. The profound understanding of how these non-central bank controlled factors influence the monetary policy transmission mechanism is a key requirement for central banks, as only by being able to predict, recognize and evaluate the effects of current or future external factors can they succeed in reaching their monetary policy objectives.*

**Keywords:** external factors; monetary transmission.

**JEL classification:** E52; E59.

## 1. Introduction

According to Taylor (1995: 11), the monetary policy transmission mechanism is defined as the process through which monetary policy decisions are transmitted, with effects on the real gross domestic product and inflation. A more detailed definition is given by Ireland (2005: 1). He regards the transmission mechanism as describing "how policy-induced changes in the nominal money stock or the short-term nominal interest rate impact real variables such as aggregate output and employment",

adding that "specific channels of monetary transmission operate through the effects that monetary policy has on interest rates, exchange rates, equity and real estate prices, bank lending, and firm balance sheets". The European Central Bank's observation completes the picture: "The transmission mechanism is characterized by long, variable and uncertain time lags. Thus it is difficult to predict the precise effect of monetary policy actions on the economy and price level."

Besides the endogenous elements composing the monetary policy transmission mechanism and its five channels: the expectations channel, the interest rate channel, the asset price channel, the credit channel and the exchange rate channel (Loayza, Schmidt-Hebbel, 2002: 4-6), elements which we call endogenous because they can be controlled directly by the central bank, there are also factors that influence the monetary transmission. We will refer to these factors as being external, or exogenous, in the sense that they fall out of the central bank's control area, so that their perturbances in the way monetary transmission functions can't be tackled directly. Instead, the central bank must learn to identify these factors, predict their occurrence and evaluate the changes brought in the transmission mechanism, so that it may adapt its monetary policy decisions to the new environment.

According to Gokarn and Singh (2011), central banks need to pay special attention to the external factors affecting the transmission channels dealing with exchange rates, credit and asset prices and evaluate the consequences of changes in the structure of these channels on production levels and price and financial stability. It is a view that we adhere to, as these channels are most exposed to the global economy and to globally formed market prices, which can induce channel structural changes that may become real obstacles in the central bank's mission.

External factors are of many types and often difficult to predict. This may prove to be a problem, as external factors have the capacity to bring upon major changes in the socio-economic climate. The most pertinent example is that of the 2007 subprime crisis, which shortly developed into a worldwide crisis, affecting virtually all aspects of the economic life, determining the deterioration of world economic indicators and forcing central banks from all over the globe to adopt a different, sometimes unprecedented, strategy regarding monetary policy as they were trying to revitalize the economy and bring growth and employment back on track without forgetting about the inflation targets.

We can identify a whole series of exogenous factors that can have major influences on the way in which monetary transmission mechanisms work. Our goal however is not to generate an exhaustive list of such factors, as this list would be both very long and constantly changing due to the processes of metamorphosis that take place all the time in the economic climate. Instead, our aim is to identify and analyze the main such factors, which, besides having the biggest probability of occurrence, also illustrate a general pattern of change induction that might be relevant to the effects of other exogenous elements that may influence the economy and the transmission mechanism at a given time. Bearing this in mind, we will continue by naming these main external factors:

- commodity prices
- changes in global economy, correlated with the continuation and acceleration of the globalization process
- volatility of financial markets
- fiscal policy.

The next pages will be dedicated to analyzing each of these factors and identifying the processes through which they are influencing the general economic environment and the monetary policy transmission mechanism.

## **2. Commodity Prices**

The changes in commodity prices represent an important external factor, with a high disruptive potential on the transmission mechanism channels, especially the asset price channel. In order to be as clear as possible, we are referring to the commodities whose prices are either established on the global market, or present a high degree of correlation with it when formed locally and which are consistent with at least one of the following criteria:

- they represent important enough raw materials for products and services produced or consumed internally so that price fluctuations will reflect in the inflation level
- have a weight in the commercial balance that is big enough to have their price changes determine commercial balance fluctuation.

We need to underline the aspects regarding the changes in commodity prices and their impact on the economic climate in general and the inflation level in particular, as shocks in commodity prices represent, together with fluctuations in exchange rates due to external causes, the main gateway through which exogenous factors influence inflation (Gokarn and Singh; 2011).

Placing ourselves in the first determinant scenario outlined above, we observe that the commodity price level has, in the first place, a direct impact on production costs, eventually reflecting itself in the production level and finished goods prices through the demand and offer mechanism. So, a positive evolution of commodity prices contributes, with an intensity depending on the elasticities of demand and offer, to the diminishing of production and growth of inflation.

In the second case and in the absence of the validity of the first scenario which was already discussed, the economy is a net exporter of that particular commodity or derived goods, which means that it is sensitive to the capital flows resulting from the transaction. The size and variation of these flows have an impact on inflation through the rise of disposable income. Also, a long period in which such flows exist may favor the development of bubbles within the economy which, if followed by a sudden drop in international prices (which means a drop in capital flows generated by exports), may burst, creating instability and making it a lot harder for the central bank to reach its macroeconomic objectives.

Another way in which changes in commodity prices influence unemployment and inflation lies in the propagation mechanism of this kind of shock. More precisely, a change in commodity prices influences the natural rate of unemployment, which is in fact the rate of unemployment required to keep a steady inflation rate (Rissman, 1986: 3). For a better understanding of the dynamics of this process, we will focus on a clear example, let's say a sudden rise in the price of oil. This will determine the natural rate of unemployment to rise, under the pressure of two factors. First, a superior oil price has effects on raising the production costs for different products, determining the producer to try to compensate, at least partially, by lowering costs with labor. On the other hand, real expenses of consumers rise, as does the level of production due to the interaction of demand and offer (Bessinger, 2001: 3-4). From here to inflation there is only one step left, given by the expectations augmented

Phillips Curve. According to the theory, "the change in the inflation rate depends on the difference between the actual and the natural unemployment rates. When the actual unemployment rate is higher than the natural unemployment rate, the inflation rate decreases; when the actual unemployment rate is lower than the natural unemployment rate, the inflation rate increases." (Blanchard, 2006). The relationship is however valid only in the short-term (Phelps, 1969). So, in conclusion, a sudden rise in oil price will put pressure on inflation only in the short run. Sufficiently however to create economic perturbances.

### **3. Financial Globalization and Monetary Policy**

Financial globalization is a long-term process, very difficult to reverse and, most importantly, in a continuous state of evolution. Bearing this in mind, the influence that financial globalization has on monetary policy and the structure of its transmission mechanism can prove to be a real challenge for central banks and their need for control. This however does not mean that financial globalization is always a bad thing from a central bank point of view, just that it alters the rules of the monetary policy game and makes it much more complex.

The process of financial globalization is probably one of the most visible effects of the decisions and economic architecture inspired by neoliberal principles and it is characterized by a complex series of elements. Out of these, the most important are the ones regarding changes in both public and private sector through easy access to capital, which, more than ever, became a „global good” and the ones concerning the process of integration in the banking system, which, in the broader context of deregulation, has become a catalyst for development with little or no obstruction from national borders. Taking a complementary view on all these, Bădulescu (2007) identifies three components of financial globalization: compartmentation of markets, financial deregulation and de-intermediation. On the same subject, Aglietta (1999) writes that financial globalization is associated with transformations which have affected the functioning principles of finance and that these transformations are closely connected with the liberalization of national financial systems and international integration.

Financial globalization is, without any doubt, among the economic realities that have dominated the world macroeconomic environment after the Second World War until today. Formally enounced as one of the ten points of the Washington Consensus (Williamson, 1989), a set of economic prescriptions which basically summarize the neoliberal economic approach, and omnipresent in the economic policy promoted in the last decades, the objective of financial globalization seems to have been reached. However, one can argue that the economic effects have not been entirely the ones hoped for. In a global society based on the profoundly human desire of expansion, financial globalization is combining forces with financial deregulation and a high degree of financialization, term used to describe the process of translating different aspects of production and economic activity into market-traded financial instruments, often very esoteric in nature. In this context, the highly mobile and, due to leverage and derivative financial instruments, highly expandable capital, has created the largest bubble in history, with effects on all economic agents, from households to banks, private companies and sovereign states. The overwhelming majority of the world's economies are part of a global financial market which functions based on a cumulus of factors, most of them

external to each individual economy. This modifies the individual national economic behavior, seeking adaptation to a given supra-national environment.

In a critic note towards the neoliberal views that have dominated economic decisions in the last fifty years, Subbarao (2012) makes a clear distinction between what he calls financial liberalization, associated with the financial globalization promoted by neoliberals, and commercial liberalization. He argues that, while the latter is beneficial to all parties involved, the former may prove itself to be very dangerous due to the fact that it makes economies more fragile and increases their exposure to considerable epidemic risk, as has economic history shown so many times. On a more conservative tone, Bernanke (2007) states that even though „globalization has not materially affected the ability of the Federal Reserve to influence financial conditions in the United States, nor has it led to significant changes in the process which determines the U.S. inflation rate, (...) effective monetary policy making now requires taking into account a diverse set of global influences, many of which are not yet fully understood”.

Having these in mind, it's worth mentioning that in 2007 The Federal Reserve Bank of Dallas created a special department whose task is to study the effects of globalization on monetary policy in an open economy, seeking to achieve a greater understanding of the way in which world financial integration influences the American macroeconomic climate.

In this context, the high degree of financial globalization plays a key part in the way that each central bank elaborates its monetary policy, as the overall impact of external factors on the economy and the monetary policy transmission mechanism is strengthened, while in the same time it becomes more interconnected with transmission mechanisms and policy decisions of other monetary areas. In this way, variables like interest rates for other currencies or global financial market prices become crucial elements that the central bank needs to take into consideration when designing its monetary policy, even if they are external to the economy in which the central bank operates. In conclusion, the less important the economy in which a given central bank operates, the less internal control does it have. This happens because, due to financial globalization, the exogenous pressures are relatively higher. Also, this is correlated with the fact that in this case, the central banks' own actions do not constitute important exogenous elements from an international point of view and thus have little influence on the international economic environment. As a result, the central bank is being often forced to shift its actions from a constructive approach to one that constitutes a reaction to external developments. This theory is confirmed by a series of studies which demonstrate the force that monetary policy decisions and transmission mechanism functioning of large economies have over smaller economies, interfering directly with their monetary transmission and affecting their economic variables, as their national bank has little to do about this. From the studies on this subject, we point out those of Awad and Goodwin (1998), Bremnes, Gjerde and Saettem (2001), or Bayoumi and Switston (2007). They conclude that the movements in US interest rates have a greater effect on interest rates in other advanced economies than the changes in the interest rates of those economies have over the indicators in the USA. Also, Ehrmann, Fratzscher and Rigobon (2005) show that, under the pressure of globalization, the intensity of mutual shocks in interest rates between the USA and the Euro Zone have risen, while Ehrmann and Fratzscher (2006) reached the conclusion that non-US market stock prices react to the Federal Open Market Committee (the organism within the US Federal Reserve

that is responsible with open market operations, minimum reserve requirements levels and standing facilities) announcements. Not surprisingly, they also found out that the intensity of these reactions is positively correlated with the level of openness of that particular economy.

Things look in a similar fashion when it comes to the effects of the high degree of banking integration exhibited by the world economy, a phenomenon that alters the functioning of the credit channel within the monetary policy transmission mechanism and thus undermines the control that the central bank has over the economic variables. This is confirmed also by the study of Cetorelli and Goldberg (2009). They point out that, in 2006, more than 65% of the total bank assets were held by banks having a global orientation, a proportion that has been continuously increasing since 1980. In this context, they study banks that have headquarters in the USA and conclude that these global financial institutions create their own internal micro-markets between the central headquarters and the foreign subsidiaries, which implicitly means that they have their own transmission channels. This fact grants them a high degree of independence from the central bank's actions, as they are able to manage capital flows between headquarters and different foreign subsidiaries as a response to monetary policy decisions. The effects of this structure are dual: internally the monetary policy transmission mechanism is weakened; externally, it favors the propagation of monetary shocks generated by the Fed, which act as external factors. Even if it centers on US based global banks, the conclusions of the study can easily be extended to a global level, dividing the world's open market economies in two categories: the ones which have an expansionist banking system, with subsidiaries and holdings at an international level, and those which have their banks dominated or controlled by foreign ones. And as we have already seen, this has a great impact on weakening central bank control over its own economy in both types of monetary zones.

For the picture to be complete, the monetary and financial environment is becoming more and more subject to extreme volatility, a situation which questions neoliberal concepts like rationality of economic agents and market efficiency. We can best illustrate this by taking a look at the high volume foreign exchange (Forex) market. Theoretically, high volumes should provide protection against volatility as there are no players big enough to influence prices by means of market transactions. Practically however, the Forex market is subject to high volatility, a phenomenon that, in our opinion, cannot be explained by looking at the currency fundamentals, but is a direct consequence of psychological factors and speculative objectives, thus providing a clear proof that markets don't function as smoothly or as efficient as neoliberal thinkers would argue.

#### **4. Financial Market Volatility**

High financial market volatility is one of the main factors outside the central bank's control that influence monetary transmission, as financial markets are one of its crucial components, having strong effects mainly on the asset price, credit and exchange rate channels. Also, a high level of volatility augments the influence on the economy of other external factors, like the commodity prices, via volatility on Forex markets. But before going any further, let us clarify what we mean by financial market volatility. According to Kotze (2005: 1-2), the term describes a series of prices or economic variables that are frequently subject to change and wide balances. It

actually measures the dispersion around a central tendency, being a measure of changes in price. Let us now briefly turn our attention to the notion of financial market, which we define as a market where financial instruments are traded. According to the International Accounting Standard 32 (2013: A879), "A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity". Mishkin and Eakins (2006: 3-8) name each type of financial markets: the money market, the stock market, the bond market, the mortgage market, the foreign exchange market, the money market and the international financial system. Returning to the subject of financial market volatility from a central bank point of view, even though sometimes central banks have the possibility to intervene on the markets and smooth out some of the volatility, we will still regard volatility as an external factor because these kind of actions performed by the central bank are both expensive and strongly limited in their application methodology, effectiveness and efficiency.

In a market environment characterized by high volatility, the functioning of monetary policy transmission channels is altered, as the effects of monetary policy decisions on financial market prices, which constitute important drivers of transmission through the asset price, credit and exchange rate channels, are relatively smaller. In other words, financial market volatility either attenuates or augments the central bank's actions and thus alters its ability to control macroeconomic variables like employment, production or inflation.

## **5. Fiscal Policy**

Alongside with market volatility and changes in global economy and commodity prices, which have an extended geographical impact, there are also factors that operate at a local level. Out of these, the most important one is represented by the changes in fiscal policy and the impact of taxation and public spending on production levels, unemployment and inflation.

First of all, we need to underline the role that taxes play in the government made budget, as they constitute (one of) the main sources of income. So, at a constant level of public spending, there is a clear relationship between the taxation levels and the budget deficit (or surplus), as raising taxes will lower the deficit (or raise surplus) and, vice versa, lowering taxes will raise the budget deficit (or lower the surplus). More concretely, let's take the case of a lowering in taxation, which, according to Blanchard (2006: 553-572) will have effects on short, medium and long-term, as following:

- on the short run, because of the extra sums available to consumers and other economic agents, the consumption will rise, which will lead to a rise in the production level
- on the medium run, the production level remains unchanged. There are however consequences regarding the interest rate, which will be higher, and on new investments, which will be lower
- on the long run, the production level drops because of the higher budget deficit which will put pressure on capital accumulations.

The effects that the fiscal policy has on the monetary policy transmission mechanisms can be of a disruptive nature, but they can also be complementary to monetary policy. In this context, the lack of correlation between fiscal and monetary policy, the former controlled politically and the latter by an independent central bank,

can lead to suboptimal economic outcomes. On the other hand however, a commonly elaborated strategy can ensure that national budgets are created in such a way that they contribute to the uniformization of economic fluctuations and thus providing an improved transmission of monetary policy actions. Friedman (2008: 53) even states that intermediary monetary policy objectives regarding consumption and investment levels can't be reached without a high correlation between fiscal and monetary decisions. We subscribe to this view, as we also hold as crucial both the government capacity to attract investments by using fiscal instruments and the high influence, from a Keynesian perspective, that the level of public spending has on the production level and, through this, on unemployment and household consumption. This is perhaps one of the main weaknesses of the European Union construction, as monetary policy is centralized and unique, while fiscal policy is decided at national level. This creates inconsistencies in fiscal policy around the EU and makes correlation with monetary policy virtually impossible, especially in the case in which national governments often choose to ignore the articles of the Maastricht Treaty regarding the restriction of the budget deficit or the ratio between public debt and the gross domestic product. We feel that addressing this issue should represent one of the prevailing objectives of the EU, perhaps taking as a model the more efficient structure of the USA, where even if individual states hold some fiscal autonomy, important fiscal issues are still decided in Washington, thus allowing correlation with the Federal Reserve's monetary policy decisions.

Fiscal policy may also have an impact on closing or widening the gaps between different regions through differences in taxation levels for different economic branches that exhibit relevant geographical concentration and through practices regarding transfer of funds between rich and poor areas. In this way, fiscal actions aimed at uniformization may contribute to a more homogenous monetary policy transmission mechanism (Fatas, 1998: 165).

Before moving forward, it's necessary to focus attention on the way in which expectations regarding future fiscal policy may influence production. For this, we rely on Rankin's (1998) study, which concludes that uncertainty towards future fiscal policy actions may have negative effects on demand in the present, with consequences on prices and productivity. The case of Cyprus, where, while these lines are being written, markets are facing a high level of uncertainty generated by the unknown effects of some controversial bank restructuring actions, is a good (and ongoing) example.

## **6. Conclusion**

The economic climate, and implicitly the monetary policy transmission mechanism, is constantly under pressure from factors that originate from outside the reach of the central bank and often even from outside the control of other national institutions. The external factors have a strong impact on the transmission processes that take place within the monetary policy transmission channels, and thus influence central bank decision-making, as it changes the structure of the cause-effect chain between decisions and economic outcomes. This is a reality which has become more obvious as the processes of globalization and economic and financial integration deepened and is something that the central bank can't fight and from this reason should not even try to. However, this changes the rules of the game that the central bank plays, forcing it to become more alert to potential external shocks and more adaptable to

their effects, so that the decisions it takes successfully navigate through a modified transmission mechanism and alter the economic variables in the intended fashion. The general changes in the global economy, shocks in commodity prices, financial market volatility and national (but non-central bank controlled) fiscal policy are just the main external factors that can modify the transmission mechanism's structure by directly affecting the way in which the transmission channels work. But other exogenous factors may originate in a wide range of external events and the central bank needs to be efficient in clearly identifying the mutations induced in monetary transmission. In an ever more global economy, this ability of the central bank is a crucial condition for the accomplishment of monetary policy objectives.

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# THE ASSET PRICE CHANNEL AND ITS ROLE IN MONETARY POLICY TRANSMISSION

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**Abstract:** *This paper addresses the subject of the monetary policy transmission mechanism by focusing on the asset price channel, which is the monetary transmission channel responsible for the propagation of the effects induced by the monetary policy decisions made by the central bank that affect the price of assets. We will analyze the asset price channel by taking a close look at its structure, internal processes and the way it delivers monetary policy throughout the economy, ultimately influencing key variables such as the unemployment rate and the levels of consumption and production. After an introduction dealing with the entire monetary transmission mechanism, its role and purposes, we will focus on the particularities of the asset price channel and the two main ways in which it delivers monetary policy decision effects: through changes in Tobin's  $q$  value, which is the ratio between the market value of a given company and its replacement cost of capital, and through the effect of wealth, both of financial and housing nature, on consumption. In our study, we will consider theoretical aspects and observations, but also empirical evidence that highlights that the exact way in which the asset price channel functions may differ from one economy to another due to differences in the structures of the respective economies and differences in psychology and cultural values of consumers. The deep understanding of the asset price transmission channel is very important for any central bank, as this is the channel that governs key aspects of monetary policy transmission linked to the market value of assets and individual wealth. These values have, as we will see in more detail throughout the paper, an important impact on both consumption and investment, two economic actions that can help the economy, but can also prove to be a crucial element in starting and perpetuating an economic crisis.*

**Keywords:** monetary transmission; asset price channel.

**JEL classification:** E52; E59.

## 1. Introduction

The monetary policy transmission mechanism is defined in several ways, which we hold as being complementary. Taylor (1995: 11) describes the monetary policy transmission mechanism by assimilating it with the process through which monetary policy decisions are being transmitted, inducing effects on the real gross domestic product (GDP) and inflation, while Ireland (2005: 1) defines it by referring to the fact that "policy-induced changes in the nominal money stock or the short-term nominal interest rate impact real variables such as aggregate output and employment". According to the the Boston Federal Reserve, the monetary policy transmission mechanism is composed of a series of channels that transmit monetary policy decisions through a cause-effect function navigating through the variables of interest

rates, exchange rates, equity prices, real estate prices, bank lending, and firm balance sheets. In this way, the central bank's monetary policy decisions are being distributed in the economy, affecting characteristics like consumption and investment levels, employment and ultimately the price level. The deep understanding of the way in which these channels work is crucial in ensuring the development of efficient and effective monetary policy. This however may prove itself to be a very complex undertaking. Besides the structural changes that come up in the system, and whose nature, magnitude and direction can be exactly known only after at least some of the effects are already in place, there are also some factors that are acting simultaneously and on a constant basis, like external shocks, technical evolution effects and changes in the structure of the economy. These factors continuously alter the relationships that are established between the different elements that make up the economy. This state of fact transforms the study of the monetary policy transmission mechanism in an activity that requires continuous adaptation to new realities within the economic system and a flexible approach on the subject.

Between the different elements of the monetary policy transmission mechanism operate complex interdependencies which create a domino effect, as changes that come up in one compartment reflect in others until they influence the ultimate variable: the price level.

The mechanism is made up of five different channels through which monetary policy decisions are delivered to the economy, affecting its different components with distinct intensities and speeds. The characteristics of each transmission channel are determined by the structural reality that governs each economy, so the exact way in which these channels function differs from one case to another.

The five channels of the monetary policy transmission mechanism are (Loayza, Schmidt-Hebbel, 2002: 4-6):

- the interest rate channel
- the expectations channel
- the asset price channel
- the credit channel
- the exchange rate channel.

From these five channels, the ones that got the most attention from economic literature so far are probably the interest rate channel, the credit channel and the exchange rate channel. However, the importance of the remaining two channels, the ones that deal with expectations of both markets and individual consumers and with the function that asset prices have in transmitting policy decisions, is not to be underestimated. For this reason, the present article will be focused on the study of one of these two channels, i.e. the asset prices channel.

The analysis of the asset price channel leads to the indentication of two key components, or two distinct sub-channels, that regulate the flow of effects from the policy decision toward the final economic variables. The first such sub-channel is functioning based on the principles underlined in Tobin's q Theory (Tobin, 1969), while the second one is dealing with the way in which wealth, more precisely changes in wealth triggered by decisions of the policy makers, influences the economy. Let us address them separately.

## 2. Tobin's q Theory

Tobin's q Theory (Tobin, 1969), named after the economist who developed it, is centered around a variable named q, which is equal to the ratio between the market value of a given company and its replacement cost of capital. A q value greater than 1 signals the fact that the market is taking into consideration a series of assets (usually intangible) which are not reflected in the company's financial statements and is an evidence of the positive perception of the market regarding the company's capacity to generate added value. Similarly, a q value that is smaller than 1 indicates the market's lack of confidence regarding the company's ability to generate added value and, implicitly, a satisfactory financial profit.

A high value of the q variable has a positive impact on investments, as a big market capitalization with respect to the replacement cost of capital indicates that the company is in a position to issue equity at a price that is high in relation with the cost of acquiring new equipment, thus making this an advantageous action, with a direct impact on the general growth of investments within the economy. On the other hand, a small q value shows that the acquisition of companies that have among their assets similar equipments and production factors is a more profitable course of action than buying new ones, so the level of investment is negatively affected (and with it the level of production) due to the increased activity on the mergers and acquisitions market rather than spending for new equipments.

Once the notion of the q variable is clarified, we can proceed to study the place that Tobin's concept has within the monetary policy transmission mechanism. Let us place ourselves in the case in which the money supply falls, which means that interest rates will rise. This will in turn provoke a drop in spending, including the spending level on capital markets, influencing negatively stock prices, as demand falls. In the same time, higher interest rates will alter the profitability ratio between stocks and bonds, putting extra pressure on stock prices. All these effects will lower the value of the q ratio defined by Tobin, which in turn will lead, as we have already seen, to a drop in investments. Similarly, a risen money supply and its consequences on the drop in interest rates will positively affect the evolution of financial assets by facilitating on one hand the capacity of the companies to finance their investment needs from capital markets and on the other hand by making the expansion through the acquisition of other companies more difficult due to their increased market value (Mishkin, 1995: 6). Cumulatively, these factors determine the companies to finance themselves cheaply from the market and used the attracted capital in order to buy new plant and equipment, thus having a positive effect on investment, consumption and, in a desired non-inflationist environment, an important effect on the production level due to the increased demand for those goods. This effect on production is however highly influenced by the elasticity that the supply side exhibits.

Tobin's q values may differ greatly from one country or monetary zone to another. Just to give an example, the mean of Tobin's q for US companies, computed for data gathered between 1994 and 2003, is 5.85 (Ehrmann and Fratzcher, 2004: 20), while in the Euro Zone countries, the value has varied between 1.16 and 1.22 in the 1995-2000 period (Bris, Koskinen and Nilsson, 2003: 8). In Romania, member of the European Union but not of the Euro Zone, Tudor (2011: 14) finds that the mean q value of a sample of companies listed on the Bucharest Stock Exchange is 1.06 (data gathered from 2006 to 2011). Even if periods for data gathering, nor the number and profile of companies, do not fully coincide, big differences are observable, especially between European countries and the US. This highlights the

diverse way of functioning within the asset price channel, leading to extra pressure on central banks to investigate, evaluate and consider the exact state that the asset price channel of their transmission mechanism is in. More, Ehrmann and Fratzcher (2004: 5-6) find that, at least within the US economy, the companies with a high Tobin's q value are affected significantly more by US monetary policy. This finding complicates the central bank's decision making process even further, as it shows that monetary policy actions have heterogeneous effects delivered through the asset price channel.

### **3. The Effect of Wealth on Consumption – General Aspects**

The effect of wealth on consumption is the second theory that we will analyse which falls under the broader concept of the asset price transmission channel. Elaborated by Modigliani (1971) in his life-cycle theory, the effect of the wealth on consumption is monetarist in nature and is based on the concept that the level of consumer spending is determined by the level of the consumer resources. These resources are made up of human capital, real capital and financial wealth. The expansion or contraction of the monetary base, and implicitly the changes in interest rates, alter the values of the available consumer resources, making companies or individuals relatively richer or poorer. According to this, a monetary expansion and its effect of a fall in interest rates will trigger the rise of the real capital component (through the rise in the price of the real estate assets) and of the financial capital (through the rise in prices of stocks and bonds). The mechanism is based on the fact that lower interest rates encourage investments, more precisely the demand for real and financial assets. The resulted rise in wealth will determine their owners to use a part of this growth for either extra investment, either extra consumption, either both. The extra consumption resulted will in its turn generate extra investment because of the adjustment of the supply level, through increased production capacity to the risen demand. It is also worth mentioning that the extra consumption is dependent of the marginal propensity to consume of every particular group which experiences a change in wealth. According to Blanchard (2006: 49), the marginal propensity to consume describes the effect on consumption of an extra monetary unit of disposable income. The scenario in which interest rates rise is to be treated symmetrically and will have opposite effects, in the way of lowering wealth, which will lead to a lower level of consumption and investments.

### **4. The Effect of Wealth on Consumption – An Inter-Regional Analysis**

At the end of the past century and the beginning of the current one, a series of studies were published on the issue of the marginal propensity to consume relative to the aggregate wealth using data from the United States. Out of this series, we focus on those written by Gale and Sabelhaus (1999), Kiley (2000), Davis and Palumbo (2001) which find marginal propensity to consume values between 4 and 7 cents for every dollar of extra wealth.

Other studies, like the one carried out by Mishkin (2007) and Bovin, Kiley and Mishkin (2010), show that there is conclusive evidence that validates the theory according to which wealth changes of same magnitude and in the same socio-economic environment, but in different asset classes, will have a different impact on consumption. We are more precisely talking about changes in real estate housing wealth, which have greater impact on consumption than similar changes in assets that fall under the other asset classes mentioned earlier.

More insight on the topic comes from Catte, Girouard, Price and Andre (2004). In their study of the economies that are members of the Organization for Economic Cooperation and Development (OECD), they found substantial differences in the ways that changes in wealth influence consumption and investments in different countries. According to the study, the propensity to consume generated by both the extra housing wealth and the extra financial wealth differ greatly according to the country we are focusing on and according to the time that has passed from the moment the change in wealth came into play. The values vary from 1 to 8 cents per monetary unit. Of interest are also the very diverse ways in which wealth influences consumption in the studied countries: there are countries in which temporal fluctuations of consumption are big (for example Australia regarding the residential wealth influences and Japan regarding the financial wealth generated changes in consumption), and others in which changes in certain types of wealth influences consumption very modestly, no matter the time frame considered (for example, the residential wealth in France and Germany). On the other hand, other cases show an immediate and high intensity response to such changes in wealth, which is tempered only by the passing of time (like the cases of the United States and Great Britain). However, the paper finds that most economies exhibit a gradual intensification of the propensity to consume with time, followed by a gradual fall once the peak is reached. Table 1 below summarizes the estimated short-term and long-term marginal propensities to consume generated by financial and housing wealth, visible on both short and long-term, in ten OECD countries.

**Table 1:** Short-term and long-term marginal propensities to consume in OECD countries

	Short -term		Long-term	
	Housing	Financial	Housing	Financial
Australia	0,02	..	0,07	0,03
Canada	0,03	0,03	0,06	0,04
France	..	..	..	0,02
Germany	..	0,01	..	0,02
Italy	..	0,01	0,01	0,01
Japan	0,01	..	0,01	0,07
Netherlands	0,02	..	0,08	0,06
Spain	0,01	..	0,02	0,02
United Kingdom	0,08	0,03	0,07	0,04
United States	..	0,02	0,05	0,03

Source: Catte et. all., 2004: 16

Yale University economists Case, Quigley and Shiller (2005) have studied the way in which wealth fluctuations in different asset classes influence consumption levels. Starting from two sets of data, one involving economic data gathered from 14 countries over 25 years (between 1975 and 1999) and the other made out of data

gathered between 1980 and 1990 from the individual states within the USA, the empiric study has reached a series of interesting conclusions, as described below. The first conclusion is that there is at best a weak link between changes in financial stock market related wealth and changes in consumption levels.

The second conclusion reveals a strong correlation between changes in housing wealth and changes in consumption. An explanation for this fact is linked to the rapid development of consumption credit bank products backed with mortgages (same type of products that were at the base of the 2007 economic crisis!). These products make it very easy for home owners to transform the market value of their houses into cash which is immediately available for consumption. The characteristics of the credit market which facilitate the transmission process between housing wealth and consumption are dependent on several variables, like the type of interest (fixed or floating), the costs generated by the credit approval process, the refinancing costs and the flexibility of the mortgage market to changes in demand for housing and thus in housing market value. In the case of the United States and of other highly industrialized countries, which have a banking system which is more developed, highly concurrent and more responsive to market financing needs, there is a higher correlation between fluctuations in housing wealth and consumption, which basically confirms the above detailed observations.

The Case et al study also concludes that, in the case of the international data set, a 10% rise in housing wealth leads, in the analyzed period, to an approximate 1,1% growth in consumption, while a similar rise in the wealth comprising out of stocks has a non-significant impact on the level of consumption. In the case of the American data set, results related to the stock market generated wealth vary substantially, depending to different study models. So, even if the effect of the change in consumption generated by housing wealth remains constant at 0,4% for a 10% change in wealth (with a dynamic of dropping to 0,3% after three semesters and to 0,2% after ten semesters from the initial shock), the values related to the housing wealth generated consumption vary, for the same data set, from 0% to 0,4%. But even if the results generated vary (so they cannot be regarded as error proof from a quantitative perspective) the essence of the findings and the underlying dynamic principles are consistent to other similar studies (even if performed on different data sets), therefore at least the principles and dynamics of the phenomenon, the thing that we most value for the purpose of our study, may be regarded as highly reliable. Sousa (2009) takes a similar perspective on the effects of changes in wealth on consumption in the Euro Zone by using primary trimestrial data from the period between T1 1980 and T4 2007. His conclusions can be summarized as following:

- Changes in financial wealth produce important and statistically significant effects on consumption. Effects are strong especially in connection to wealth changes triggered by the stock market and mutual funds. In figures, a 10% growth of the financial wealth will trigger an immediate 0,6% growth in consumption. This value will eventually peak at 1,5%.
- Effects on consumption that are generated by changes in housing wealth are close to zero and not relevant from a statistic point of view.
- The rise of consumption is persistent and responds slowly to shocks, as the immediate change is of low intensity compared to the longer term one.
- The immediate effect of changes in wealth on consumption is substantially different from the same effect observed over a longer period of time. This fact is indicated by the major negative difference between the immediate

growth in consumption of 0,6% for a 10% growth in financial wealth and that of the longer term growth in consumption which peaks at 1,5% for a 10% growth in financial wealth.

The conclusions of this study are congruent with those of a similar study conducted by Skudelny (2009), which also finds no effect of housing wealth on consumption and important, time persistent and slow effects on consumption triggered by changes in financial wealth. However, the Skudelny study evaluates the marginal propensity to consume as being more modest, i.e. a 10% raise in wealth will generate a 0,13% growth in immediate consumption and a 0,35% growth on the long run.

We see rather significant differences between studies. However, these differences are based in a small extent on the interpretation methodology of the raw data, but more on differences in data sets from both a geographical/economic area and time point of view. The most important differences can be found when comparing results from the United States and the Euro Zone, differences which are linked less to the exact values of the marginal propensity to consume, but on the fundamentally different way in which these economic areas function, a fact that is underlined by the big differences in which the two main subcomponents of wealth (financial and housing) influence consumption (or fail to do so). We can include these differences into two categories:

The first category includes differences regarding the sub-component of wealth that influences consumption. More precisely, if in the United States the only sub-component with effects on consumption is the housing wealth while the financial wealth has no statistically significant effects, in the case of the Euro Zone things are exactly the opposite. Here, the financial wealth has the potential to influence consumption, while, for Europeans, the values from housing market do not represent a consumption altering factor. An explanation for this lies in the following:

- There are significant differences in the functioning of the banking system and consumer credit behavior between the two regions. In the USA, the mortgage based credit is highly developed and widespread, being a direct and easy way to transform housing market value into consumption capital. In contrast, in the Euro Zone this type of credit product is less spread, so changes in housing value don't have such a strong transmission channel and thus don't have an impact, at least not a significant one, on the consumption level.
- The public view on the two components of the financial wealth that may have an impact on consumption, i.e. stocks and mutual fund participation, is fundamentally different, as in the United States these instruments are being regarded from a more long-term investment perspective than in Europe, being the base of a greater number and variety of long-term saving vehicles, like pension funds or college funds.

The second category is made out of differences regarding the persistence of consumption and the time needed for it to react at shocks in wealth. In the USA, where consumption is influenced by housing wealth, we can observe a fast reaction to wealth changes, after which the advance in consumption is prone to drop in an almost linear fashion, provided that no new shock comes into play. According to Case et al. (2005), this drops with a quarter after four semesters and by half after ten semesters have gone by from the initial shock in housing wealth. In the Euro Zone however, things look just the opposite, as consumption has a higher initial resistance to changes in financial wealth (which, as seen, is the only one affecting

consumption in the Euro Zone), just to experience a sustained ascending trend later on, even in the absence of a new shock in wealth levels.

These studies and their findings, are different depending on the economies taken into consideration. They confirm the strong link between wealth effects and the consumption sub-channels (and consequently of the entire asset price channel) on one hand, and behavioral sciences on the other, as consumer mentality plays a decisive role in the way the relationship between wealth and macroeconomic context is carried out. These effects on consumption and, implicitly, on investments are not linear or uniform, but highly dependent of a series of social, economic and cultural factors, characteristic for each geographical area or population. The sensitivity exhibited by consumption spending relative to changes in wealth depends on a wide series of factors linked to the functioning of credit markets and the habits of consumers. Of great importance are the elements which reflect the tendencies to finance consumption, the size and composition of wealth and the perception of the persistence of change in the prices of relevant assets.

## **5. Conclusion**

The theories surrounding the asset price channel come as additional to the classic views on the monetary policy transmission mechanism, which are based on money supply effects that navigate through the interest rate channel, the credit channel and the exchange rate channel. These theories are complementary to the more traditional ones dealing with the above mentioned channels, as they cover key areas in understanding the complex phenomena that take place within the economy as a consequence of monetary policy decisions. As we have seen, asset prices directly affect wealth, both of households and companies, with a great impact on investment and consumption. From a company point of view, theories based on Tobin's  $q$  value clearly show that asset prices are decisive in the decision between greenfield investments, with consequences on production levels, on one hand, and mergers and acquisitions, which imply that no new plant or equipment is bought from producers, on the other. From a household perspective, the wealth level, made out of the housing wealth level and the financial wealth level, influences consumption based on a mixture of economical, psychological and cultural criteria that is unique for every community, thus bringing differences in asset price channel functioning between economies and even heterogeneity in certain monetary zones. So, even if less reflected by the economic literature dealing with monetary policy transmission mechanisms than the so called traditional channels, the asset price channel is of great importance and, as proven in the previous years, its elements may also have significant consequences on the economy. These consequences can be both positive, by providing efficient means of transmitting monetary policy decisions, and negative, by allowing debt and consumption to reach unsustainable levels. This is the case of the profile discussed earlier, that has played a major part in the 2007 economic crisis, as the intense functioning of the housing channel linked the bubble from the housing market with the banking system, while at the same time the extra consumption that was generated by this link was fueling bubbles all across the economy. In this context, central banks need to profoundly understand the processes that take place within the asset price channel. This has to be done keeping in mind that, besides the general functioning principles of the channel, some points of potential inter-regional heterogeneity may appear. These points of difference may, as we have seen, manifest themselves with regard to the impact of

financial and housing wealth on consumption. The complex structure of the asset price transmission channel is yet another argument for central bank attention, as its efficient and effective use is crucial for the accomplishment of macroeconomic objectives.

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## THE PRACTEAM MODEL REGARDING SCHOOL TO ACTIVE LIFE TRANSITION. STUDENTS' EXPECTANCIES

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**Abstract:** *The project "Practical training of economist's students. Inter-regional partnership in the labor market between universities and the business environment" focuses on student's transition from school to labor market. Concretely, it tries to highlight the general role of practical training – specifically the field related practical training set as a mandatory discipline in the curriculum, by identifying possibilities of interventions from supervisors. Starting with literature review regarding determinants of school to active life transition, the present contribution discusses the outline of the practical training set as a mandatory discipline in the curriculum. Within PRACTeam project the practical training itself is accompanied with a series of supplementary services (aptitude testing, counseling, career guidance, mentoring by a trained tutor, granting financial aid, awarding excellence over contests and internships). It represents an active partnership on the labor market meant to address directly students' expectations regarding practical training, work, and entrepreneurship. At least two main benefits may be derived from the training and tutoring. First, as a dual type model of transition from school to active life, allowing students to become insiders in the labor market. Secondly, changes in supervisor' patterns of interactions and behavior/attitudes toward work and employees may also occur, which in turn may improve the work. A pretest-posttest non-experimental design was applied for the PRACTeam evaluation. Using administered questionnaires and focus group method to students before and after they completed their practical stages we examined their attitudes and behavior towards elements of the dual model of transition. The paper concludes that a dual type model of transition from school to active life - that implies the education and practice occur simultaneously, successfully meets students' expectancies and may be functional for improving permeability between professional and academic knowledge.*

**Keywords:** *transition from school to active life, youth insertion on labor market, practical training, PRACTeam model, youth unemployment, youth self-employment, youth entrepreneurship*

**JEL classification:** J01, J08, J18, J21, J44, J64

## 1. Introduction

Dramatically rising of youth unemployment and tougher conditions faced by youth in entering the labor market are major social and economic challenges of this decade across Europe (OECD, 2012). There are approximately five million unemployed youth (those under the age of 25) in the European Union (EU). The youth unemployment rate in the EU was 22.3% in November 2011 - more than double than unemployment rate - 9.8% (Eurostat, 2012; OECD Statistics, 2012). The highest youth unemployment rates (around 30%) were registered in the most affected by economic crisis EU Member States: Greece, Italy, Latvia, Lithuania, Portugal, Slovakia, Spain and Ireland (OECD, 2012) but, as OECD shows, the increase in youth unemployment was not much more than for adults in the context of recession (OECD, 2012). The problem of youth unemployment is chronic across Europe. Moreover, labor market integration of graduates is severely threatened by requesting work experience from employers. In this context, the general concern is for search "approaches that work" in helping young people to enter the labor market for their first job. Investigating the factors that can facilitate transition from school to active life or keys for success for youth insertion on labor market are research areas that intensified in recent years across the EU.

## 2. Theoretical model of determinants of school to active life transition

Practical training and work experience within different educational forms, are considered key factors in facilitating the transition from school to active life and labor insertion of graduates (Cardosa, 2004; Hill and Holzer, 2006; Tovatt, 2011; Bell and Blanckflower, 2011). Transition from school to active life is defined as the process of change from the life of a youngster included in an educational form to the independent life. Current approaches distinguish between *transitions from school to active life* from the *labor market insertion* as the first does not assume the completion of studies. It may take place within an educational process under the form of practical training (Garcia, 2007, apud. Pîrciog et al., 2010: p. 75). The latter reflects employment after graduation of studies (Hill and Holzer, 2006).

Nevertheless this distinction is sometimes unclear as the succession school-work does not necessarily follow the classical model: employment may alternate with periods of inactivity, periods of schooling and work may overlap or even be reversed. More, school-to-work transition is differentiated between countries based on the link between educational systems and labor market, the standardization of educational outcomes at national level, openness to choice through the educational path. This is largely known as the *dual model* in which education and practical training take place simultaneously, allowing the student to become an "insider" on the labor market during his or her studies. The educational system is more standardized and stratified having close links with business organizations; links that develop continuous offers of internship or jobs for graduates etc. This is the success model for the youth insertion on the labor market (Mickovska-Raleva, 2010; Van Der Velden and Wolbers, 2003; Ehlert and Cordier, 2002). Another "way-out" from the classical model is given by the *entrepreneurial experiences* and *self-employment* as professional integration and, as processes of transition from school to active life and/or insertion on the labor market. Consequently, this current model moves away from the classical one (continuous, linear and homogenous), as it is rather discontinuous, un-linear and un-homogenous.

In the search of a theoretical model of determinants of school to active life, the founding theories are: the *human capital theory* (Becker, 1964), *job-competition model* (Thurow, 1975), *the job search theory* (McCall, 1970; Mortensen, 1970) and the *insider-outsider theory* (Linbeck and Snower, 1988).

Becker's *human capital theory* is the first approach in the economical thought regarding the behavior towards education and the implications of education on the labor market reflected over the salary differences between different educational levels (Becker, G., 1964). The author considers that "education and professional training are the most important investments in human capital" (p. 45). Nevertheless employers are not interested merely in the value of a diploma but also on the acquisition of "capacities and performances on the context of productive work". McCall's (1970) and Mortensen's (1970) *job search theory* as well as Thurow's (1975) *job-competition model* open the "Pandora's box" in the search of determinants of work insertion. The first determinant is the salary as job search behavior reveals it is an important criterion in accepting or rejecting a job (McCall, 1970; Mortensen, 1970). Next, analyses highlight the defensive importance of education and the level of compatibility of qualifications needed on the labor market and those provided by the educational system (Thurow, 1975).

These aspects are particularly relevant for youth as they are the most vulnerable to become unemployed. They are the end of the waiting line when jobs are scarce as employing new-comers increases the training costs for the company (Thurow, 1975). The *insider-outsider theory*, makes the distinction between employees and unemployed, and reveals that most youth graduating any form of education are outsiders competing with insiders with more experience (Linbeck & Snower, 1988). Other studies analyze the quality of jobs acquired by youth or the impact of different factors on unemployment among youth. For example macro-economic conditions, dimension of youth cohort, educational level, occupational structure, institutional arrangements shaping opportunities for new-comers on the labor market, occupational and educational policies (van der Velden & Wolbers, 2003).

We consider relevant for analyzing the determinants of school to active life transition also some recent studies. Reimer, Noelke, et al. (2008) explain cross-national patterns of labor market entry among students who drop out in 11 European countries. Reimer, Noelke & Alexander's (2008) analyzed the impact on occupational status of university graduates using data from 22 countries showing that differences in labor market opportunities for university graduates from different fields of study increase with the expansion of education at university level. Smyth & Banks (2012) identified the following key influences that shape the choices of young people: individual habitus, institutional habitus of the school (amount and type of guidance provided), personal agenda of each young, and how they evaluate alternatives. Authors explore how patterns of institutional differentiation in higher education systems are related to educational inequalities at the time of transition from higher education to work.

Starting with these, our analysis will try to highlight the general role of practical training – specifically the field related practical training set as a mandatory discipline in the curriculum. More, in this case, the practical training is conducted within a project that accompanies the practical training itself with a series of supplementary services (aptitude testing, counseling, career guidance, mentoring by a trained tutor, granting financial aid to all participants, stimulating education and professional integration by awarding excellence over contests, and internships etc). All these are

accomplished through an active partnership on the labor market for facilitating the *transition from school to active life* of economics' students from Bihor, Timisoara and Suceava counties (Romania) and responding to the students' expectations regarding practical training, work, and entrepreneurship.

### **3. Methodological design**

Our endeavor is based on the experience of PRACTeam project: "Practical training of economist's students. Inter-regional partnership in the labor market between universities and the business environment", financed through European Social Fund - "Investing in People!" Contract no. POSDRU/90/2.1/S/64150. Within the project special emphasis was put on cooperation and collaboration between all actors involved in the practical training of students: students, teachers and representatives of the labor market. Consequently determining student's expectations regarding both the practical training and work (employed or self-employed) were the two aims of several research activities.

In order to *identify students' expectations regarding practical training* we have developed a methodology describing both the instruments and the sample for each of the three years in which the methodology was implemented. In the first year we administered questionnaires to students which completed their practical training in all three Faculties as well as focus groups with candidates. The second wave of assessment was based on focus groups with three type of groups: PRACTeam graduates (students from both BA and MA level which have completed their practical training within the project), non-PRACTeam graduates (students from both BA and MA level which have completed their practical training outside the project), and candidates. In the last year we have conducted focus groups solely with candidates from both BA and MA level. There were 30 focus groups organized, with an average of 12 students from different educational programs.

More, in the second year the managerial team of the project initiated a research on the broad topic *Students' Transition from school to work*. The survey was based on an on-line questionnaire composing in several topics from assessment of competences and interests related to work, psychological attitudes and values to aspects regarding social capital of students. The data collection is still on-going thus the results presented in this paper is based on a preliminary data base consisting of 374 valid responses obtained from students from all partners in the project.

The analysis presented in this article is based on both these sources of data: the identification of expectancies regarding practical training and the survey.

### **4. Main findings and discussion**

#### **4.1. Students' expectations regarding practical training**

The focus groups aimed at assessing the impact of the practical training. The results were grouped in the following dimensions that were considered relevant: best practices in terms of the practical training of students, the strengths and threats on the organization of practical training, and other problems in the development stages of the training program.

Most students reported positive experiences. When problems were mentioned students reported those problems were faced by "other fellow" detaching themselves from them. In this section we mention some examples that can be considered best practice models. As highlighted during the discussions, these detailed models could

be positive in terms of the companies as responsible business practice and as work attitudes of students in practice.

One of the first aspects that were appreciated by students represent the firm / company / institution. The interest, attention and time spent by tutors with their students were the cases where students were most satisfied. The best practices are considered the situations where students had the opportunity to visit different departments or offices interacting with more people from each company.

*"we were involved in a multitude of activities, seen various accounting documents, managed documents and recorded all data in the program. From a practical standpoint, we made all kinds of trainings in effective production hall, [...]. Within 2 weeks of practice I can say that I made a lot of activities, from accounting stuff, script to actually work in practice."* (Andrew, PRACTeam graduate).

In the same manner were assessed the instances where the student has actually worked with several employees of the firm learning from many people:

*"I didn't work entirely with my tutor, but I have met other people ... and for questions and problems we could turn to tutor, but it was better, they actually took the time to show us everything."* (Adriana, PRACTeam graduate)

Indirectly determined as a model of good practice where the situations where students were allowed to make real actions. Often they noted with regret that just watched how to do business (accounting data entry, inventory paperwork and process, performance of contracts, receiving guests at the hotel, credit dossiers and so on) without being allowed to actually contribute to the processes.

During discussions with graduate students no special references were made regarding how the university tutors fulfilled their duties. We believe that this is because no problems were encountered so no issue was mentioned in terms of their involvement. Tutors which constantly monitored the activity of their students were appreciated by their students.

During focus groups it was emphasized the importance of students' attitudes regarding practical training. Several models have emerged from these discussions are detailed in the next section.

This type of problem has occurred mainly in the discussion with students that conducted their practical training outside the project, working students, mostly realizing practical work at their job. However, personal experiences of these students have shown the importance of involving people, perseverance and insistence on tutoring. Three of the participants in this group obtained their job after a successful completion of practical training as undergraduate students:

*"I've been practicing my license at ---, heritage department. After the first day they sent me home but I called and told that I had a number of hours to do practice...and only because I insisted they let me work."* (Mirela, non-PRACTeam graduate)

In this sense, students must be active in education generally, and particularly in connection with practical work experience. Thus volunteering in an organization is viewed as a model of good practice among students as it provides the required job experience.

*"Students miss huge opportunity because they are not involved. At least 2 hours to be ready to learn each day. Have time for their future, not only for coffee. You have to change something in order to be good."* (Lavinia, non-PRACTeam graduate)

*"For example at my working place, last year came a MA student from Moldova. She came as a volunteer, not paid the first two months, to learn the human resources. Now she is hired ... additionally was rewarded for the two months of volunteer work."* (Laura, non-PRACTeam graduate)

Problems arising from student attitudes can be directly addressed by explanations provided by the practice managers and tutors regarding the importance and effect of the actions that they make.

One of the major risks, reported directly by one of the graduate students was related to departments in which they do practice activity - they have to be adequate to the student domain of knowledge.

Another important issue is related to practice time, especially for firms and accounting departments.

*"Yes for those in accounting, July is not the best time of the year, the end of the quarter, it's crazy ... and April and normally that firms do not have the time, and we stand after hours ... no time and explain to others how thing works in the firm."*(Mirela, a non-PRACTeam graduate student).

In the discussion of non-PRACTeam graduates they drew attention to a potential risk in terms of practical training: due to the short duration and the fact that it is often only the presentation of the company / firm and some related action, the image created is " beautiful ", and fails to capture the complexity of the type of problems handled every day.

*"Yes I've heard, some colleagues were to one firm--- but they showed only that everything goes well ... no company showed them problems."*(Monica, non-PRACTeam graduate)

Consequently we believe that learning by doing is an important approach for the practical training. It is important to note also that practical training should also go beyond the required curricula and students should get involved, voluntarily or part time in different organizations.

#### 4.2. Students' expectations and attitudes regarding work – draft 1

The attitudes regarding work were analyzed through the on-line survey conducted with students, PRACTeam graduates, from all three Universities. In this section we present the analysis of some of the questions revealing the importance attributed to work and dimensions valued in work by students.

Regarding the first aspect, it is interesting to note that students have the same responses as generally Romanians. In a percentage of 54% students consider work as a very important aspect of life, below family which is highly valued by 91% of students. At national level in average 56% Romanians consider work as important, while family is important for 86% (Comsa, 2009). A comparison between students' responses and the national findings reveal that the hierarchy of areas of life is the same for the two groups, yet the percentages differ. Table no. 1 describes the answers of students.

Table no. 1. Importance of different areas of life

Areas of life	Very important	important	Less important	Nat at all important
Family	<b>91,40%</b>	8,00%	0,00%	0,50%
Work	<b>54,30%</b>	44,10%	1,10%	0,50%
Religion	31,30%	41,70%	19,50%	7,50%
Friends and acquaintances	22,50%	67,60%	9,40%	0,50%
Free time	19,00%	67,60%	11,80%	1,60%
Politics	1,10%	9,40%	48,90%	40,60%

Regarding the second dimensions analyzed, students consider that it is most important that jobs are fit to their capacities – 70%, that it allows learning new skills – 70%, and that it promotes achieving something – 67%, as shown in Table 2. At national level, the most important feature of a job (95% of respondents considering it very important) referred to “good pay”, followed by security (85%), people treated equally and working with pleasant people (both last dimensions with 79%).

*Table no. 2. Importance of different job characteristics*

<i>Which of the following aspects do you consider important regarding a job?</i>	Very important	Important	Little important	Not at all important
	%	%	%	%
Meeting abilities	71,66	26,20	2,14	0,00
Learning new skills	70,32	25,40	4,28	0,00
Achieving something	67,38	31,02	1,34	0,27
Job security	63,90	32,35	3,48	0,27
Pleasant people	60,43	36,63	2,94	0,00
People treated equally	59,89	33,42	5,08	1,60
Family friendly	54,81	32,09	11,23	1,87
Interesting job	51,07	45,72	3,21	0,00
Good pay	39,04	58,56	2,41	0,00
Use initiative	32,62	57,75	9,63	0,00
Have a say	25,40	62,03	12,03	0,53
Good hours	25,13	60,43	14,17	0,27
Responsible job	24,87	62,57	12,03	0,53
Meeting people	19,79	55,35	21,93	2,94
Useful for society	17,91	47,59	29,95	4,55
Generous holidays	9,09	39,57	46,52	4,81
Not too much pressure	5,08	33,42	54,01	7,49

The way people see work gives significant insight regarding a given society. Students’ responses show a tendency towards valorization of work. Work is viewed mostly as a place where one can express their skills, people who do not work become lazy, its humiliating to receive money without work, work is a duty towards society, and work must come first even if it means less free time.

*Table no. 3. Attitudes towards work*

<i>Do you agree with the following statement?</i>	agree	Not agree nor disagree	disagree
One must have a job to express one’s skills.	<b>81.02</b>	16.31	2.67
People who do not work become lazy	<b>67.92</b>	23.26	8.82
Its humiliating to receive money without work	<b>48.94</b>	38.77	12.29
Work is a duty towards society	<b>40.37</b>	42.51	17.11
Work must come first even if it means less free time.	<b>37.43</b>	37.43	25.13

### 4.3. Students' and entrepreneurship

Since 1989 Romania has experienced significant changes in social and economic. Given the lack of entrepreneurial tradition, youngster's decision to set up a new business is determined in parallel by a number of contextual factors. Academic environment can and should take into account important social impact it can have to support entrepreneurship among young students. "Given that entrepreneurship is one of the most important guidelines towards economic health and prosperity perspective, the development of a true middle strata of society, the theme of entrepreneurship in young people is of particular importance to social responsibility of universities and educational system generally beyond the economic implications and mentality that attracts" (Boarescu, 2011).

Entrepreneurial approach has specific characteristics of young students resulting from a number of factors such as educational level, family entrepreneurship tradition, and charge level with responsibilities. Duties arising from the quality of student and the multiple roles assumed daily make entrepreneurship task more difficult than in the case of young people without academic commitments. Economic environment during the crisis is competitive and does not provide any exemption. Against this background there are many failures, which can be a major risk factor and a demotivating factor in the medium or long term. These aspects should be taken into account by any research aimed at student entrepreneurs. In academia is, more than ever, a need to stimulate the appetite for entrepreneurship and find suitable methods to support legally additional facilities for youth.

Existence of positive models of entrepreneurial activity is, as shown in our research (PRACTeam project) an important determinant of personal choice to engage in entrepreneurial activities.

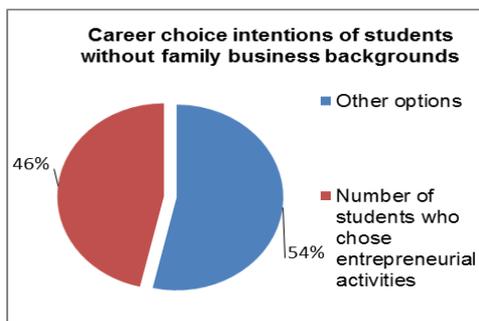


Figure no. 1. Career choice of students without family business backgrounds

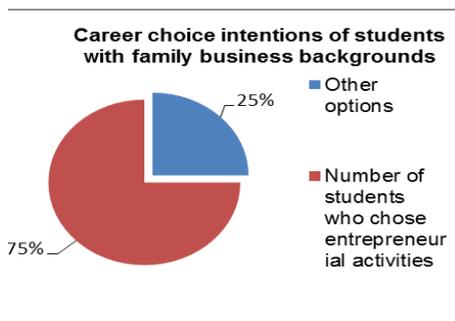


Figure no. 2. Career choice of students with family business backgrounds

From statistical perspective it can be seen that the percentage of students who are determined to engage in a business and from families engaged in various entrepreneurial activities or links with business is one third higher than the percentage of students who want to do business without have a tradition of entrepreneurship in family of origin. The existence of a mentoring model appears as a significant factor for the availability to start a business. In this context it is clear that the University should play a role not only in the theoretical training of students, but

should enable them to enter as often in contact with successful entrepreneurial models.

## 5. Concluding remarks and future perspectives

Synthetically we can say that our analysis shows that PRACTeam model – as a *dual type model of transition from school to active life* - that implies the education and practice occur simultaneously, allowing students to become insiders in the labor market even during studies and education has very close links with business organizations, successfully meet students' expectancies. At least two main benefits may be derived from our model of practical training. First, it allows students to become insiders in the labor market. Secondly, changes in supervisor' patterns of interactions and behavior towards work and employees may also occur, improving the quality of work. The broad scope of education and practice may be functional in reducing unemployment rate as well as for improving permeability between professional and academic knowledge.

We will continue to monitor *graduates, practice tutors and managers of host organizations expectancies* in order to identify the needs for practice stages for students in Economic Sciences of the Bihor, Timis and Suceava counties and to evaluate de impact of PRACTeam model labour market partnership (survey of the structured questionnaire applied to graduates which has benefited practice and internship stages through PRACTeam project, survey of the structured questionnaire applied to PRACTeam practice tutors, and open structured interview applied to managers of PRACTeam practice host organizations).

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# **SPECIFIC APPROACHES OF PRODUCTIVITY IN SERVICES. VALUES OF SEVERAL COMPARATIVE INDICATORS**

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**Abstract:** *The paper proposes a synthesis of several specific approaches of productivity in services, in order to provide a better argued theoretical basis for a realistic assessment of the values of several comparative indicators. From a conceptual point of view, the paper will take as a base some definitions of productivity as a quantitative and industrial indicator, revealing certain aspects that need a widening of the area of approach, in the purpose of being suitable for immaterial activities. Based on the brief analysis of productivity, performance and servicity indicators, the research establishes correlations between them in the immaterial field. Elder and, as well, most recent analyses found in the field literature are used, from most rigorous sources, and they are supplemented with own approaches; such approaches ore pointing out several most specific features that are specially set for services and intellect-intensive activities. Technical and financial aspects of common productivity are taken into account, as well as performance in realising various goals, non-economic here included, and the service components, in a complex approach. The presentation focus on nuance features in the quoted references, in the purpose of a fine defining of the indictors and approaches. Specific particularization is achieved based on the literature. Methodologically, the paper is approaching in an unorthodox manner, the plus of value issued from the human activity, i.e. being in a view coming from a fine analysis of the service performed by any economic activity, in a market system. The conceptual importance of these comparative indicators is concisely highlighted, and it consists mainly in the opening that can become a useful ground for practical applicative analyses, which actually are proposed in the future developments of the topic. The research results reveal the relationship between these comparative indicators as well as some conceptual differences between them. Their application can be made for material and immaterial economic activities, at different levels of economic entities concerned.*

**Keywords:** *productivity, performance, services*

**JEL classification:** *A13; D24*

## **1. Introduction**

The economic growth practiced and preached in the modern world (especially in the consumer society) is, in essence, that conceived since the dawn of industrialization and carried out since then (and even today), in forms focused on quantity, counting always on the growth of productivity, regardless of the physical or pecuniary forms

to express this indicator, which became the central (and defining) principle of the desired (targeted) and achieved developments in the economy.

The implications of these approaches are profound and we also find them in the new big crisis. They arise, in essence, from the quantitative concept of productivity in terms of market mechanisms (directed by the development of short and medium term interests in the specific individualistic approach).

Although the formula of productivity is very well-known, as the ratio of the output quantity studied and factors necessary to achieve that output (Fourastié, 1952: 53), one cannot in any way say that this indicator does not bear (anymore) discussions (even controversies, especially when it comes to services). And the most justified debate fosters the qualitative (or quality-related) aspects and the possibilities of "quantifying" the qualitative aspect.

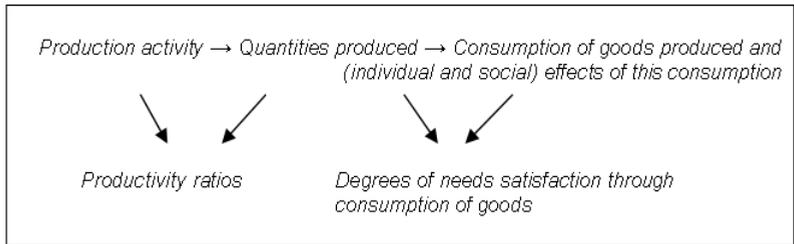
## **2. Productivity, Performance, Servicity**

Vincent André (1968: 1), like most economists, advanced the phrase of productivity from an industrial point of view, but also noticed the presence of quality. Vincent mentions the existence of causal relationships that suggest the idea of social productivity; the author considers this latter type of relationships very complex and difficult to measure because of the intervention of numerous psychological and sociological factors representing the qualitative aspect of the issue. (Vincent, 1968: 1) Hence the difference between productivity calculated and recorded in the national accounts and real (causally defined) productivity. In both Manoilescu (1986: 67) and Vincent's ideatics, we note the tendency of mentioning also the quality aspects that are difficult to quantify, which is relevant to the insufficient and inadequate nature for the analysis of the immaterial, of the concept of productivity, as understood at present.

We recall the importance of "harmony" and "co-operation" that, for example, List and Manoilescu mentioned, to make best use of the system's synergy by combining various factors, with so different results in various systems (individual and national economic entities). At the multitude of effects and correlations that can be established in the tertiary sector, Jacques De Bandt's developments should also be added. He considers productivity an absolutely central concept, the result of economic activity (De Bandt, 1991: 115). The French economist says that "the most used and accepted measure of productivity is the one that measures the evolution of the value added in volume compared to the evolution of each of the factors considered separately (partial or apparent productivity) or to the weighted evolution of all factors (in quantity or volume)" (De Bandt, 1991: 116) and "it is quite difficult to accept the number of services (number of advice, number of medical consultations, ...) as indicators of quantity" (De Bandt, 1991: 118), because each service provided, each medical consultation, for example, is a single service, each medical case has a particular feature and manifests differently from person to person, even every doctor has a certain (moral or professional) behaviour according to the particularity of each case.

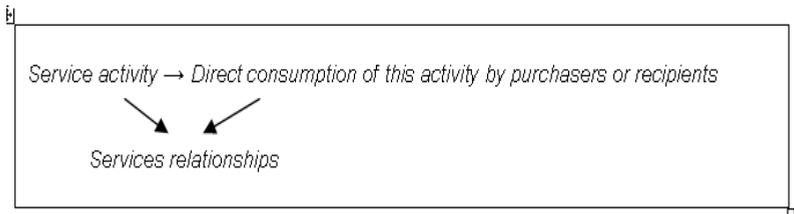
Jean Gadrey points out (as most economists who have studied the tertiary sector) that the notion of productivity is related to the material output (Gadrey, 1996: 54), and certainly not to the immaterial output. In this regard, two schemes proposed by Gadrey raised particular attention (that we name by type of activity - material or immaterial – that each of them refers to, as shown below). (Gadrey, 1996: 54) They

show that the notion of productivity, as defined and formulated in the material sector, is not found in the theory of services.



**Figure 1:** Analysis of productivity in material output

Source: Gadrey, Jean, *Services: la productivité en question*, Paris: Desclée de Brouwer, 1996, p. 54



**Figure 2:** Analysis of the so-called productivity in immaterial activities

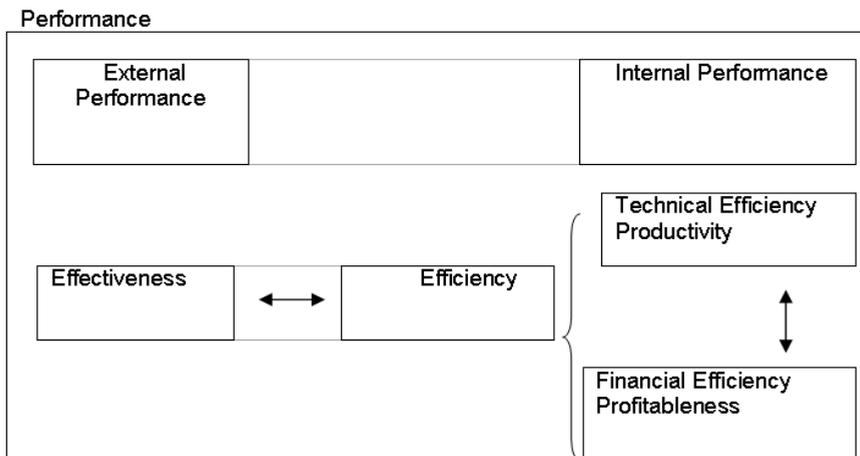
Source: Gadrey, Jean, *Services: la productivité en question*, Paris: Desclée de Brouwer, 1996, p. 55

As can be seen in Figure 1, between production activity and quantities produced there are different productivity ratios expressed quantitatively and not qualitatively, and between the latter and consumption of goods produced there are different degrees of needs satisfaction only through consumption of goods, according to the utility of each good produced for a consumer at a given time. Productivity, as an indicator of technical efficiency, measures a technical performance, i.e. "a ratio of output volume and input volume". (Djellal and Gallouj, 2006: 12) In contrast, in service activity, it is consumed even at the time it is produced (see Figure 2) "the product" of the service cannot be stored and consumed later, the needs of service consumers are highly satisfied, otherwise they will not choose the same provider in the future. We keep this observation for analysis (1)

By analogy with material output relationships (productivity ratios), we added to the figure 2 of Gadrey "service relationships" being characteristic to relationships that are established between people in the event of such services, in this case, between the provider and the customer. Such relationships relate to the quality of services and are intended to offer providers faithful (or not) customers and thus to consolidate (or not) market position. These service relationships include of course the satisfaction level of consumers who use those services. The result is a wider coverage of the servicity over performance. In terms of productivity, this particular service relationship other than the relationship that relies solely on productivity growth is likely to emphasize the special nature of productivity in services itself and

therefore the impossibility to use the usual (industrial) productivity indicators for services, particularly for pure services or with high immateriality.

Gadrey considers the notion of productivity only a partial criterion of the efficiency, idea pursued by the economists Djellal and Gallouj - see figure 3 - ("direct", "immediate" or "intermediate"), and in the case of services, the economic and sociological analysis is focused mainly on the "indirect", "mediated" or "end-type" effects on users, depending on the specific existing social relationship and the time horizon of their impact (Gadrey, 1996: 57). In this respect, Gadrey (1988: 67) distinguishes between *direct* and *immediate output* (nature and quantity of services consumed; notion that is relevant for market services and defines the services paid for the commodity unit transacted) and *indirect* or *mediated output* (service effects on their beneficiaries). The latter concept is actually the *outcome* (long term outcome) in services and depends on the quality of participants or social structures that form around their actions (Gadrey, 1988: 67).



**Figure 3:** Productivity, efficiency, effectiveness, performance  
 Source: Djellal, F. and Gallouj, F. (2012: 26)

For Djellal and Gallouj (2012: 24), the concept of performance incorporates the concepts of efficiency and effectiveness: they define the concepts as follows (Jivan, 2013): performance is the ability of an organization to achieve a variety of objectives (economic, social, political, ethical etc.), a priori fixed and containing various aspects related to the development of that organization. This concept can be seen in terms of internal performance (efficiency) and external performance (effectiveness).

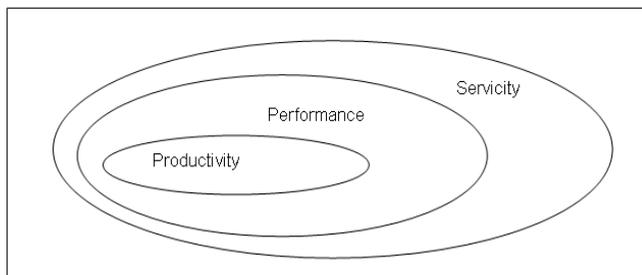
Effectiveness is the measure for achieving goals (regardless of their nature: economic, social, political etc.). External performance is related to the notion of *mediated* or *indirect output* or to the *outcome*, i.e. external performance also includes other types of effects, for both the provider and the user. Efficiency measures objectives (often economic objectives) that have been achieved by saving resources. As can be seen in Figure 3, there are two types of efficiency: technical efficiency (productivity expressed as the ratio of *output* volume and *input* volume) and financial efficiency (expressed through the rate of profitableness).

In respect of these delimitations, one must observe (Jivan, 2013) that in addition to the efficiency regarding the organization's objectives, the efficiency beyond the

concerns (interests) of the economic entity analyzed was not taken into account, which is a kind of "external efficiency" compared to the efficiency evidenced by Djellal & Gallouj, in the sense that it is seen (designed and perceived) in terms of the environmental framework of that organization (natural, social environment etc.). Hence, it also considers (takes into account) the profound effects on others, not just on the economic agent under study. This is a second observation to submit for analysis (2)

In this type of approach, thus extended (according to the servicity's perspective Jivan, 2000), the performance indicator appears as a quantitative indicator, like the others, (successfully used in the industry), rather than a mostly qualitative indicator. In contrast, the servicity concept includes (is larger than) the concept of performance defined above (i.e. how it is understood in the industry), along with the efficiency and effectiveness components (as defined by the economists Djellal and Gallouj). To understand these concepts and nuances that make the difference between them (for the definition of terms), the distinction between internal performance and external performance (*targeted* by the entity under analysis - highlighted by Djellal&Gallouj) is essential, along with their differentiation, in addition (highlighted by Jivan - made by the criterion of servicity) to the external performance not covered by the sphere of interest of the entity under discussion (is *ignored* or, at least, was not considered a main objective).

The two observations we made (1) and (2) lead to the conclusion of our research focus of bringing in actuality a concept that appears as the result of a synergistic approach, taking into account the effects for both the provider and the consumer, *i.e.* servicity (Jivan, 2000), a concept encompassing the complex efficiency issue (economic, social, environmental, political, moral, spiritual and human etc.) of human activities, by establishing numerous correlations between providers and beneficiaries – see the insert made to the figure 2), as well as between providers or beneficiaries and the external environment (see figure 4).



**Figure 4:** Productivity, performance, servicity

Source: Outline by descriptions on the topic from Jivan (2013)

Servicity, in the narrow sense (Jivan, 2000: 94), expresses the productivity outside the entity analyzed and "expresses *aspects of the utility other than profit*, it means performance, effectiveness, externalities and other implications than those covered by the entity under analysis." Broadly, servicity means "*the utility made available to the beneficiary of the activity (service)*, when the agent that provides the service is not regarded as a *totum factum* (from an individualistic perspective), but integrated into an existing utility frame from which he also benefits.

So, servicity is expressed by *utility over these conditions*, that is the utility created by the economic agent over the utility enjoyed by himself for his activity, or his contribution over the conditions that allowed his contribution, or the way he knew how to receive (and capitalize on) what he has received or how to create over what has been created (from a practical perspective of the activity under consideration), or how he was able to give something (through that activity), while he has received something (for the activity).” (Jivan, 2000: 102) For example, physicians have received medical-themed lessons through the educational system to be able afterwards to exploit, through their own contribution, these lessons in treating various diseases (depending on the specialization assumed): the contribution of doctors requires their efforts and dedication, including an associated opportunity cost. And the healed patients in turn will re-involve in the economic life, creating new values and benefiting employers and the entire human society etc.

#### **4. In conclusion**

As a conclusion to those presented above, there is an apparent preference for the concept of *servicity*, rather than for *productivity* or *performance* (that so rigorously defined by Gallouj and Djellal); in this respect, the answer is very complex: (i) By common productivity, services are considered less productive than the activities in agriculture and industry, but this hierarchy of productivity is not made on the basis of qualitative and creative criteria, but on the basis of quantitative criteria, the productivity indicator itself being a quantitative criterion; in our research, although we did not focus primarily on material sectors; Manoilescu (1986: 100) expressly noticed that labour productivity also implies a certain social dimension); the concept of servicity is more comprehensive than the commonly utilized indicators of productivity; (ii) Servicity involves superior achievements in terms of quality (in the same time unit and with the same effort as in the case of productivity in industry); even if the results of the educational system or political decisions taken with regard to the health care system, for example, are materially unquantifiable, it does not mean that these results do not exist, but they were just not measured, and the related effects will be found over time for the long term and short term, in preparing physicians (and other professionals); the effects of educational and health care systems will be also found in the good and service consumers’ self-education; it will be thus affected; (iii) Servicity implies a value system (Jivan, 2000: 89). In servicity approach, the overall economy is seen both from the consumer’s perspective and from the economic enterpriser’s perspective, taking into account the effects for both sides. Each of the participants should have responsibilities for the other side and, moreover, for the entire social, economic, political environment, and not be concerned only with their own good: self-interest oriented thought can lead to destruction, so, for example, recording a business profit without taking into account whether the business generates pollution or the positive effects are only for the short term and exclusively for the economic entity concerned, thus ignoring any medium and long term negative effects through pollution produced by the degradation of their employees’ health , as well as of other residents around etc. Usually, such effects are not quantified in accounting or in domestic and international databases.

Such indicators can be practically applied for analyses concerning various economic entities, be they material and immaterial, at individual, industry or national level, on different time horizons of interest, allowing complex approaches and being

appropriate for the largest area of scientific concern, thanks to eliminating the routine limits of productivity indicators.

#### 5. Acknowledgements

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# EVOLUTION OF ENVIRONMENTAL TAX REVENUES IN POST-COMMUNIST EUROPEAN MEMBER COUNTRIES

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**Abstract:** *Human activities can have harmful effects on the environment, which may affect the ability of future generations to meet their own needs. Therefore, policymakers must decide which economic instruments should implement in order to achieve the sustainable development objectives.*

*In Europe, effective action demands the collaboration of all economic agents on all member states in order to bring environmental taxation in line with the EU's climate change targets: reducing its greenhouse gas emissions by 20% in 2020 compared to 1990, raising the share of EU energy consumption produced from renewable resources to 20%, and 20% improvement in the EU's energy efficiency.*

*After two decades of post-revolution economic problems and living-standards, some countries from Central and Eastern Europe took the first steps in designing extensive environmental fiscal reforms. The reform implemented in more advanced post-communist countries spread pretty quickly to upper-middle-income and middle-income countries.*

*Through this article, I intended to present an in-depth analysis of energy taxation and an assessment of trends and status of the environmental tax revenues as a share of GDP levied by post-communist E.U. member countries: Bulgaria, The Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovakia, Slovenia by processing the information provided by Eurostat database.*

*Each information is updated and accurate as possible, although that the use of economic instruments for environmental policy is rapidly changing.*

*This article, which is only a work in progress, will conduct further research on a wide range of environmental tax issues. Potential projects will be submitted in publications, article, and conferences. They will cover:*

- *main drivers for the evolution of environmental tax revenue such as final*
- *energy consumption, energy efficiency policies, renewable energy, Europe*
- *Brent Oil Spot price;*
- *the situation of excise duties applied to the most important sources of*
- *energy in relation to the minimum energy tax provided by EU legislation in*
- *CEEC-10;*
- *assessments of the extent to which governments from EU-27 and CEEC-*
- *10 are using environmental taxes; and*
- *entropic degradation – consequences of economic growth.*

**Keywords:** *environmental tax policy; environmental fiscal policy; environmental tax revenues; new E.U. member countries.*

**JEL classification:** *H23; Q50; O57*

## 1. Introduction

Environmental tax policy, which is an indispensable part of European fiscal policy, is employed by governments in order to reduce resulting emissions and to promote environmentally sound products. Environmentally-related taxes are designed by the policy makers such that to be environmental effective. They should ensure fiscal sustainability by achieving revenues and can have distributional implication.

The environmental fiscal policy reform in transition and emerging-market countries of Central and Eastern Europe (CEE) has introduced taxes for environmental purposes, relating to: energy, transport, pollution and resources as European statistics distinguish.

According to the European Commission, an environmental tax is a tax whose tax base is a physical unit that has a proven specific adverse effect on the environment. (European Commission, 2001)

The EU publication "Environmental taxes — A statistical guide" presents several reasons why including the CO<sub>2</sub>-taxes under energy taxes rather than under pollution taxes. "First of all, it is often not possible to identify CO<sub>2</sub>- taxes separately in tax statistics because they are integrated with energy taxes. In addition, they are partly introduced as a substitute for other energy taxes and the revenue from these taxes is often large compared to the revenue from the pollution taxes"

Many countries from Central and Eastern Europe, especially developed countries, have improved their environmental tax policy by introducing new economic instruments with the purpose of supporting and promoting environmental improvements. Therefore, environmental taxes are being increasingly recognized as having the potential to serve as an effective instrument for efficient management of natural resources and to encourage environmentally positive behaviour change. (Deepak Das, 2005)

However, the environmental tax policy had become politically sensitive when the price of mineral oil products increased drastically due to the high prices for crude oil and the devaluation of the euro. (Stefan Bach et al. 2001)

The extent to which environmental tax receipts should have the potential to generate additional government revenues calls for a much closer interaction between environmental tax and government environmental objectives. Thus, the new environmental tax revenues that could be collected may provide an opportunity to increase economic incentives for stakeholders to promote ecologically sustainable activities.

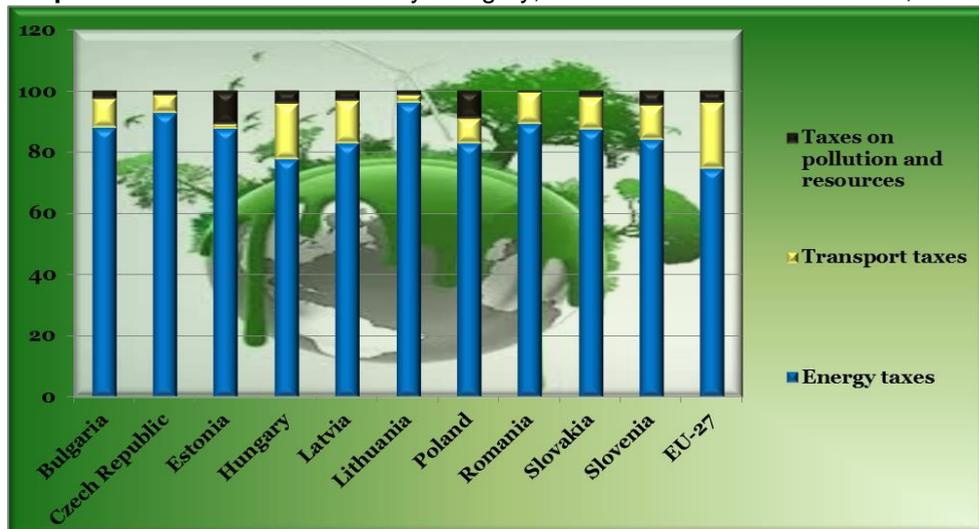
### 1. Trends of environmental tax revenue in total taxation in Central and Eastern European Countries

Further, the discussion focuses on a comparison of 'green taxation' system between European member states from Central and Eastern Europe.

In most post-communist European countries, taxes on energy account for the largest part of environmental tax revenues, between 77,9% (Hungary) and 96,1% (Lithuania) in 2010.

In Hungary, revenue from transport taxes forms 18,1 % of total environmental taxes in 2010, the highest in CEECs. Estonia ranks first in revenue from pollution/resources taxes.

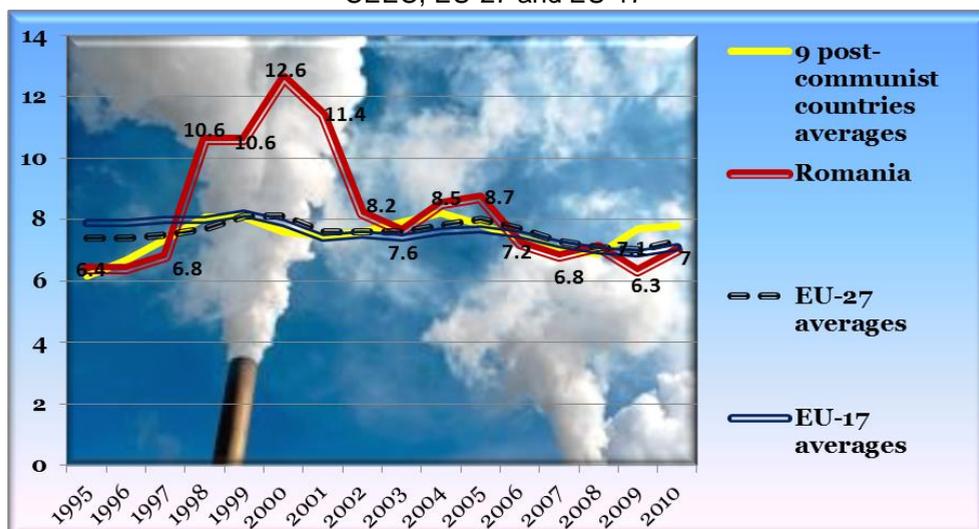
**Graph 1.1.** Environmental taxes by category, % of total environmental taxes, 2010



Source: Own processing of Eurostat data

The share of pollution and resources taxes in total environmental taxes differs a lot across the CEECs, from above 8,5 % in Poland (8,8%), Hungary (10,6%) to only about 1,5 % in Czech Republic (1,5%), Lithuania (1,4%)- see Graph 1.1.

**Graph 1.1.** Environmental taxes as % of Total Taxation in Romania, CEEC, EU-27 and EU-17



Source: Own processing of Eurostat data

In the first decade after communism, Romania recorded a rising trend of the share of environmental tax revenues in total fiscal taxation, thus, between 1995 and 1999 increased almost 6% recording a peak in 1999. This was the highest level of collections from environmental taxes in Europe of all time.

Table 1.1 is focused primarily on the revenues that were raised in Romania in certain years. They can explain the increased levels of the receipts of environmental taxes in a post-communist country between 1994 and 2004. It also describes the main characteristics of the environmentally related taxes, fees and charges in Romania.

**Table 1.1.** Revenues raised from environmentally related taxes in Romania in million Dolar U.S.

Name	Type	Year	Million Dollar U.S.
Air emission non-compliance fees	Fee/Charge	2000	0.3
Fuel excise tax	Tax	1998	0.1
Fuel excise tax	Tax	1999	0.2
Fuel excise tax	Tax	2000	0.2
Fuel excise tax	Tax	2001	0.2
Fuel excise tax	Tax	2002	0.2
Water abstraction charge	Fee/Charge	1998	4.1
Water abstraction charge	Fee/Charge	1999	3.6
Water abstraction charge	Fee/Charge	2000	16.9
Water abstraction charge	Fee/Charge	2001	15.7
Water abstraction charge	Fee/Charge	2002	19.5
Water abstraction charge	Fee/Charge	2005	45.6
Water abstraction charge	Fee/Charge	2006	64.2
Water effluent charge	Fee/Charge	2000	8.2
Water effluent charge	Fee/Charge	2001	11.1
Water effluent charge	Fee/Charge	2002	16.8
Water pollution non-compliance fees	Fee/Charge	1994	0.7
Water pollution non-compliance fees	Fee/Charge	1995	0.8
Water pollution non-compliance fees	Fee/Charge	1996	1
Water pollution non-compliance fees	Fee/Charge	1997	0.4
Water pollution non-compliance fees	Fee/Charge	1998	0.3
Water pollution non-compliance fees	Fee/Charge	1999	0.2
Water pollution non-compliance fees	Fee/Charge	2000	0.8
Water pollution non-compliance fees	Fee/Charge	2001	1.2

Source: OECD/European Environment Agency database on environmentally related taxes, fees and charges

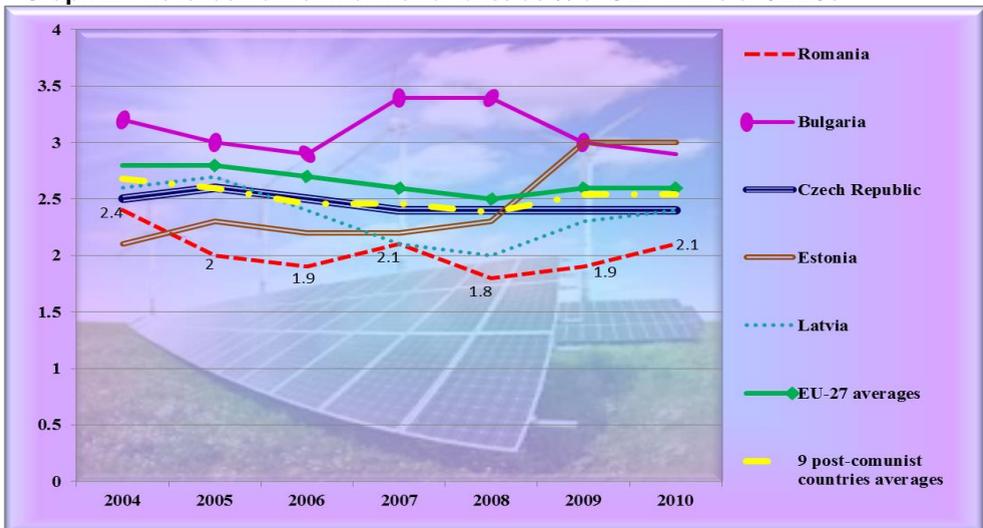
In the analyzed period, Romania raised around 212,2 million dollar U.S., from different green taxes, fees and charges levied by Romanian Government in accordance with European Environmental Agency. Nevertheless, in 2010 Romania raised around 2,5 billion EUR from environmental taxes, corresponding to 2.1% of GDP.

## 2. Comparison between post-communist European countries concerning the ratio of environmental taxes revenue in GDP

This section includes a historical data chart including the ratio of green taxes to GDP of the ten post-communist European member countries.

In CEEC-10, the share of environmental taxes in GDP has fallen between 2004-2008, mainly due to a reduced levels of energy tax revenues, as graph 2.2. shows.

**Graph 2.1** Revenue from environmental taxes as % of GDP in five of CEECs



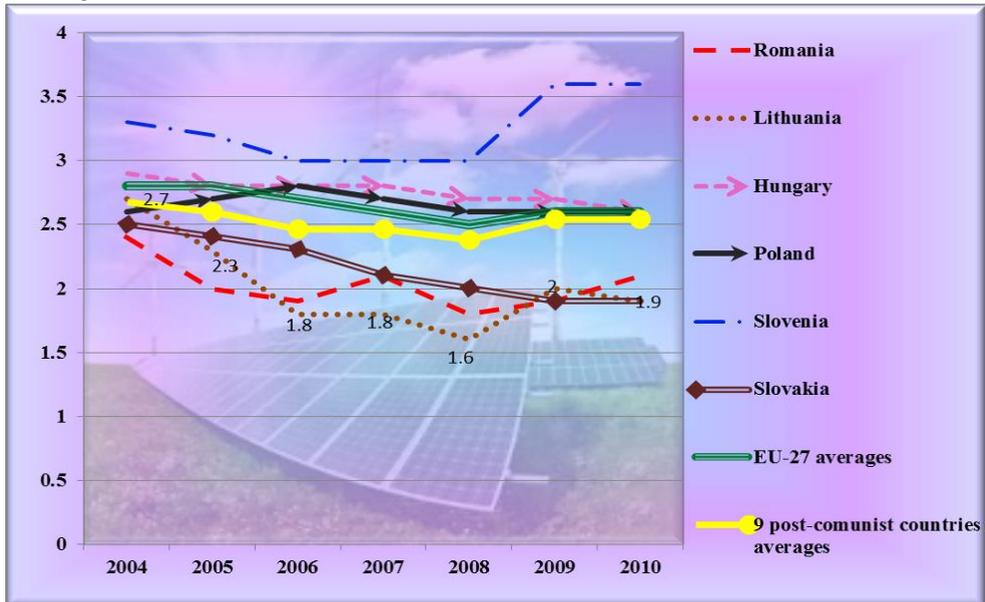
Source: Own processing of Eurostat data

Graph 2.1. emphasize that the aggregate trends in environmental tax revenues in Romania recorded two distinct phases in the prior and post European integration period. In the first phase, the ratio of green tax revenue to GDP dropped, from 2,4 percent in 2004 to 1,9 percent in 2006. In the year when Romania joined European Union, the share of environmental tax revenue to GDP recorded an increase of 0,2 percent over the previous year, followed by a second decrease in 2008. The second phase occurred during the economic crises when green tax revenues increased from 1,8 percents in 2008 to 2,1 percents in 2010.

During the analyzed period, Bulgaria (Graph 2.1 and Slovenia (Graph 2.2.) were the only two countries surpass the EU-27 and CEE averages in respect of the revenues from environmental taxes as a percent of GDP. The Czech Republic environmental

tax revenues recorded a similar trend to that of the CEEC's averages around the amount of 2,5 percents of GDP/

**Graph 2.2.** Revenue from environmental taxes as % of GDP in five of CEECs



Source: Own processing of Eurostat data

During the analyzed period, another two Central and Eastern European countries, Lithuania and Slovakia have had recorded levels of the ratio of tax revenue to GDP below the trend of EU-27 averages and CEEC's averages. Slovakia highest value over the past 10 years was 2,7 percents in 2004 while its lowest value was 1,6 (%) in 2008. Starting from a value of 3,3 percents in GDP in 2004, tax revenue in Slovenia reached a peak of 3,6 percents in 2009 and 2010 in a period of economic downturn and stood there in 2010. The dispersion of tax revenues amount across the ten post-communist European member countries had ranged across time, recording the lowest range (2,38 %) in 2008.

### 3. CEEC-10 Kyoto targets and results corresponding to the first commitment period

All Central and Eastern European Countries have individual GHG reduction and limitation targets under the Kyoto Protocol that should be reduced in two commitments periods: between 2008-2012, and between 2013-2020. Party's assigned amount is the maximum amount of emissions (measured as the equivalent in carbon dioxide) that a country may emit over a commitment period in order to comply with its emissions target.(Kyoto Protocol Reference, European Commission, 2002)

Table. 3.1 Kyoto emissions between 2003-2010, under or above Kyoto target 2010/2012

EU MEMBER STATE	2003	2004	2005	2006	2007	2008	2009	2010	KYOTO TARGET 2012	% 2010/2012 UNDER KYOTO TARGET
ROMANIA	-	160.1	153.7	153.9	152.3	145.9	123.4	121.4	259.9	53.3 %
LITHUANIA	16.7	21.1	22.6	22.8	24.7	24.3	20.0	20.8	44.1	53 %
BULGARIA	-	68.9	69.8	71.5	75.7	73.5	58.9	61.4	127.3	51.77 %
LATVIA	10.7	10.7	10.9	11.7	12.1	11.9	11.0	12.1	23.3	48%
HUNGARY	83.3	79.5	80.5	78.8	75.9	73.1	66.9	67.7	114.9	41 %
POLAND	382.5	396.7	399	399.3	398.9	395.6	381.8	400.9	551.7	27.33%
SLOVAKIA	51.1	49.5	48.7	49.0	47.0	48.8	44.2	46	67.2	22.9 %
CZECH REPUBLIC	147.5	147.1	145.6	149.1	150.8	141.4	134.7	139.2	180.6	22.9 %
ESTONIA	21.2	21.2	20.7	19.2	22.0	20.3	39.2	39.2	40	2 %
										% 2010/2012 ABOVE KYOTO TARGET
SLOVENIA	19.7	19.9	20.3	20.5	20.7	21.3	19.5	19.5	18.6	4.84 %

As Table 3.1 shows nine out of ten Central and Eastern European member countries analysed in 2010. Data for 2010 show that Romania GHG emissions dropped by 24,17% and Bulgaria emissions by 10,88% in 2010 compared with 2004. Although the economy has expanded significantly, emissions have declined, which proves notes the Commission that it is possible to decouple economic growth from emissions

The table details performances by member states: nine out of ten Central and Eastern European Countries – Bulgaria, The Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovakia– had met the targets under the protocol using existing measures, in 2010 compared to 2012 target. Taking into account the information of all available data, Slovenia alone had not met its targets in 2010 compared to 2012 targets, GHG emissions being 4,84% above Kyoto target. In most of the 10 CEEC, emissions has decreased slightly from 2004 to 2010.

#### 4. Conclusions

Focusing primarily on environmental tax revenues, regional environmental tax policy, this study shows clearly how Central and Eastern European countries have improved their new economic instruments, such as environmental taxes. Governments aim to ensure fiscal sustainability with the desire to support and

promote environmental improvements, by collecting tax revenues.

Ten years after EU enlargement, the new member states from Central and Eastern Europe have been hit by the current economic and financial crises which has been characterized by more or less turbulence in different countries.

During the analysed period, we can see that in post-communist European member countries as a whole, environmental tax revenues (as % of GDP) were situated well below the EU-27 averages. This may be a result of uncertainty and unpredictability of environmental tax revenues, and, in particular, their erosion as a result of the behavioural responses of polluters and final consumption compression.

As The revenue from pollution, resources, transport taxes may be affected by behavioural responses. (Don Fullerton et al. 2008) Energy taxes, fuel taxes might be less affected by behavioural responses than other environmental taxes due to their inelastically-demand commodities.

In respect of increasing environmental taxes, Governments should take into consideration the negative impacts of environmental taxes on competitiveness of different economic sectors and income distribution of households.

Environmental taxes should be levied to more detailed environmental issues, such as energy consumption, toxic waste, sprawl, water and air quality, and habitat protection.

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## RESTRICTION OF CREDIT AFTER THE CRISIS OR A DIFFERENT ALLOCATION OF RESOURCES? THE ITALIAN CASE

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**Abstract:** *The granting of credit, whose excessive diffusion was one of the causes of the economic and financial crisis of 2007, has suffered profound changes during the following period of economic recession. The granting of credit to households and businesses has been strongly influenced by the effects of the economic downturn, the banks' choices and the intervention of the supervisory authorities. The credit, however, is also an instrument of monetary policy through which governments and central banks try to stimulate the economic growth. There are, nevertheless, several and complex limitations to the actions of banks and other financial intermediaries, information asymmetries and structural limits of the credit market. Should also be considered that in many Countries the economic recession had a strong influence on the choices and opportunities for all economic agents, making it difficult to lay the foundations for economic recovery. In the previous years, the lowering of standards of borrowers and the presence of low interest rates, setting the conditions for the so-called housing bubble. The subsequent reactions, the general worsening of the economy, the lack of funding and liquidity, in addition to the strict rules imposed by the supervisory authorities, have led banks to tighten securely controls on the characteristics of borrowers, being also obliged to put more attention on the composition of the balance sheet. Under these conditions, have risen subjects that do not meet the requirements to receive funding, and at the same time increased the difficulty to repay loans and interest. In this paper a multidimensional scaling analysis is used to observe the situation of credit in the Italian regions before and after the outbreak of the crisis, considering the average values for nine variables and for two different period, before and after 2007. Searching for dissimilarity between areas of the Country, is highlighted a clear separation before the crisis and remained essentially unchanged between northern and southern regions. Furthermore the analysis of time series showed that the granting of credit has declined slightly, but above all has changed destination, from productive purposes and investments, to support consumption.*

**Keywords:** Credit; Monetary policy; Multidimensional scaling.

**JEL classification:** E51; E52; E58.

## 1. Introduction

The rationing of credit by banks is a phenomenon that occurs when some characteristics of the business cycle interfere on the work of financial intermediaries. There are several reasons that limit the grant of credit, but in general it can be stated that it can find its origin in the so-called information asymmetries and limits to the action of lending institutions. The greater rigidity in the granting of credit to households and businesses characterize recession periods and is due to many causes which in some cases are mutually reinforcing. Authorities' actions in the regulation of the financial sector, in addition to the difficulties which have arisen in the balance sheets of the banks, and the lack of liquidity, may induce the so-called marginal borrowers to be unable to restructure their debts or obtain new financing. This is a case where there is a risk of still more defaults, as well as those caused by the general economic slowdown.

The credit is seen as a channel of transmission of monetary policy and makes it possible to amplify the effects of although small shocks as a result of the macroeconomic policy, also due to the imperfections of the credit market. As well as an instrument of monetary policy transmission to real economy, the credit plays a fundamental role in supporting economic growth with obvious links on the levels of investment and consumption. Among the leading causes of the so-called credit crunch there is the increase in the perception of the risk of insolvency, the latter that has been one of the reasons of the financial crisis of 2007.

The restriction, at certain levels, would be detached from the consideration of the rates charged, at least for specific types of borrowers. This discrimination and the banks' choices have been explained with information asymmetries, in particular through the process of adverse selection, considering an increase of the risk of default associated with the increase of the interest rate. In this condition, the banks establish a maximum limit of convenience of the rate at which make loans.

Many factors affected the market of loans from the banks side: the scarce availability of loanable funds, the decrease in the equity capital, the expectations of financial intermediaries, the securitization of some assets present in the banks' balance sheet. Furthermore, the worsens general economic situation obviously influences the conditions of many borrowers and potential ones. The economic recession leads to a decrease in the demand of credit, but also in the markets of investments and durable goods (Bernanke et al., 1991).

The explanation of the triggering causes of the economic and financial crisis of 2007 is illustrated, among others, by Brunnermeier (2009). As known, the so-called "housing bubble" has grown in a context of low interest rate influenced both by the decisions of the *Federal Reserve* and from capital inflows, in particular from Asian Countries to try to control the depreciation of national currencies to the dollar. In the same years was developing a model of behaviour of banks which did not involve more the traditional cycle of the loan. This was not to wait for the expiry of loans, but to split and to incorporate them into structured products (with different levels of risk) offered to financial investors.

This of course allowed to rebalance the composition and the risk of the balance sheet of banks. Obviously this involved the move out of the direct responsibility of the banks of large part of the risk, and therefore the same banks could lend more easily to borrowers.

So even subjects without personal guarantees could obtain funding for the purchase of properties, which were guaranteed by the fact that the value of the real estates

steadily increased (and therefore often mortgages were higher than the actual value of the properties). This growth in turn was influenced by the demand made possible by the low rates and the minimum quality standards for granting mortgages. The collapse of values because of what happened during the 2007, after bubble burst, became a reason not to compensate the creditors.

The generalized deterioration of the economy may even threaten the existence of weaker banks, due to the composition of the ratio of capital owned and assets hold, and of course different level of risk involved in the same assets. The greatest risk is for the banks that have a large amount of assets characterized by the possibility of losing their value, such as loans granted to companies, but also equities and bonds. In the case of economic recession, to prevent these complications, the authorities may intervene to regulate the financial market, imposing different and more stringent limits to the work of banks, new rules that involve a more careful selection of the composition of their capital and assets. These interventions serve to protect the system by intervening especially towards the banks at greater risk, as mentioned because hold a lower share of capital of property and a high proportion of assets at risk of losing value. Bernauer and Koubi (2002) analyse the dilemma of the two possibilities, restriction of credit or bank default, searching for the best solution to limit these two possible problems for the economy. So the dilemma arises from the point of view taken in the regulation. It is possible to pay attention to the short term, avoiding the credit crunch, to prevent a worse financial and economic situation. Moreover the authorities can't risk the so-called banking panic caused by the failure of weaker banks, or even the risk, and decide to intervene with stronger prudential requirements. In this situation, banks should limit the granting of credit to meet the more stringent rules. This would tend to intensify the already difficult economic situation by creating more problem for the activities and needs of companies (Bernauer and Koubi, 2002). Furthermore, the fact that the restriction does not allow the marginal borrowers to refinance their debts, risking bankruptcy, in turn induces an additional problem for the banks to which they can't refund loans (Woo, 2003). In addition, banks may fear for the future hoarding of capital, and then push to accumulate funds immediately. Another reason is the need to hold additional funds and the difficulties that are created by network effects, when banks are both creditors and debtors to other institutions and this shall create worries about the credit risk of the counterparty and this doesn't allow to erase positions of opposite sign (Brunnermeier, 2009). Of course, the uncertainty and the scarcity of private savings also make more difficult for the banks to find new resources, for example through the issue of bonds.

The paper, after this introduction, presents a paragraph on the scientific literature regarding performance and problems related to credit during economic recession and post-crisis periods, followed by a description of the European context and the observation of time series data on the Italian credit to analyse the evolution of various categories. The differences between the regions, in terms of average credit concessions to households and companies, before and after the crisis, are subsequently examined, by using a multidimensional scaling analysis at regional level.

## **2. Monetary policies and effects on credit**

The issues that led to the credit crunch have various sources. The trend in the flow of credit, expansions and contractions, suffers changes connected with the

economic cycle and for Dell'Ariccia and Garibaldi (2005) the behaviour of changes is asymmetric, resulting in the higher volatility of credit contraction than credit growth.

This lead to define the credit crunch as a typical characteristic of cyclical downturn, as observed by the Authors after the 1991 recession. In addition, the net changes of the credit are composed by different types of operations that are credit contraction and expansion, for the banks a commitment on at least two fronts: efforts to recover risky loans and the need to select new debtors (trying to reduce informational asymmetries). The fact that contraction is more volatile than expansion and takes place during periods of recession of the cycle, and the observation that excess credit reallocation is negatively correlated with the fluctuations of *GDP*, suggests that the strengthening of the credit crunch in negative periods of the economic cycle has dissimilar explanations compared to expansion, that happens in the case of cyclical upturns (Dell'Ariccia and Garibaldi, 2005). On the role of the credit channel as a propagator of initial shocks also Balke (2000) in an analysis of the credit conditions as a nonlinear propagator of shocks. The Author proves that shocks are more effective in the tight-credit regime, furthermore there is a different effect of monetary variations, whereby the contractionary ones have a higher effect on output than expansionary shocks.

As mentioned before, we must consider the presence of the imperfections in financial markets in the two main channels of transmission of monetary shocks. The two channels used by monetary policy are the bank-lending channel and the broad credit channel (or balance sheet) (Bernanke et al., 1996). The first one considers the imperfections caused by informational asymmetries between the lenders and the borrowers. The principal role is played by the premiums that are required for the funding, furthermore the operations of open market of the central bank, modifying the lending possibilities of banks, have direct consequences on the customers' necessities of renovate or ask for new funds. The second channel, of the broad credit, is instead founded on the dissimilar characteristics of debtors, usually considered as firms. The balance sheet plays a determinant role on the fixation of premiums and a contractionary monetary policy usually induce a worsening condition for the same balance sheets. This situations produce an increase of the original shock.

The ineffectiveness of monetary policy can derive at least from a couple of reasons, the liquidity trap hypothesis and the credit crunch hypothesis. Woo (2003) observed the two hypotheses on the case of recession in Japan. The first one is due to the simultaneous presence of high real interest rates and nominal interest rates near zero, making it impossible for the central bank to further act.

The increase in the money supply and the decrease in interest rates should stimulate the demand, which in this case is braked by negative expectation about the future, that induce an increase in savings, with negative consequences on investment and consumption. Furthermore, the intervention on reserves and the above mentioned reasons about credit crunch can lighten the real effects through the credit channel, which should translate the original expansionary monetary policy. The credit crunch hypothesis consider instead the lack of capital available to banks to grant more loans, despite low interest rates, slowing therefore transfer channels of monetary policy.

Of course, in the performance of credit must also be considered that each bank independently determines the requirements that a subject must possess in order to

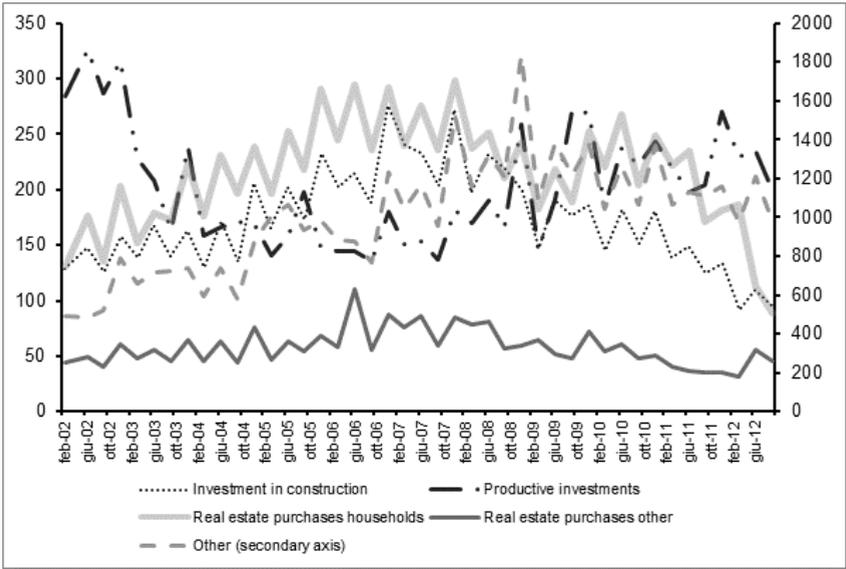
be eligible to receive loans. Gorton and He (2008) note that such competition between banks induces endogenous periodic cycles of credit restrictions. The Authors observe the phenomenon as a repeated bank lending game, based on publicly available information and on the assumptions of the behaviour of other banks. Consequently the models used by banks to take decisions and then the changes in the amount of loans granted are an autonomous source of macroeconomic fluctuations.

### **3. The condition of credit in Europe and the Italian case**

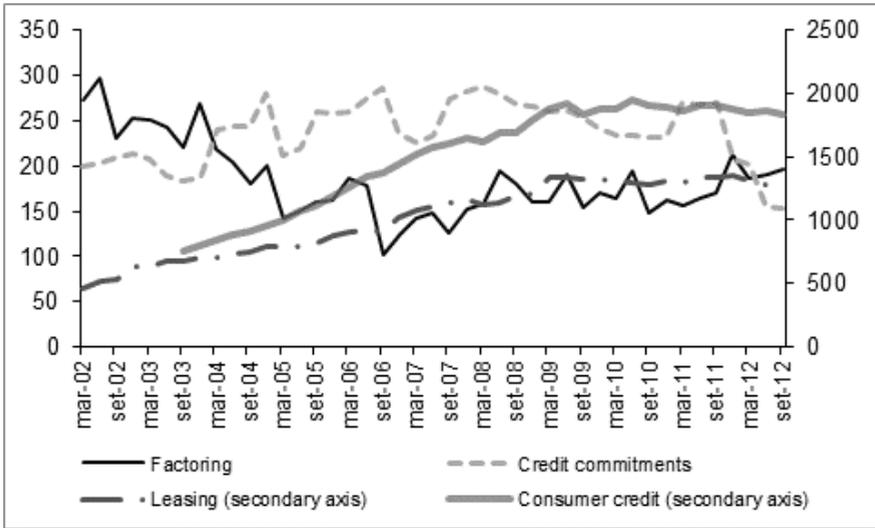
The first complications, caused by the inability to collect ranked subprime mortgages, occurred since 2007, and then the first signs of illiquidity on the interbank market. Liquidity decreases when it becomes more difficult to share the risk and hard to raise funds, or sell assets on the market (Brunnermeier, 2009). The *European Central Bank* and the *Federal Reserve* did intervene by lowering interest rates and injecting billions of euros and dollars into the interbank market credit to lessen the liquidity crunch. Monetary injections in the system may generate an effect of liquidity resulting in a positive effect on the availability of credit to households and in general on real activities (Li, 2000). The cost of financing in cases of necessity by banks is a key factor on the choices of liquidity. In Europe, the intervention of the *ECB* was intense especially in Italy and Spain, two Countries hardest hit by the recession and where the granting of credit to households and businesses was greatly diminished. The European situation has been worsened by the general undercapitalization of banks, as well as difficult circumstances for companies and households. All of these economic agents in difficulty must focus their attention to repay debts rather than borrow to invest and consume. In this study we use data on credit from *Banca d'Italia (Bollettino Statistico, 2002-12)*, at regional level and covering the period 2002-2012. As said, Italy was one of the Countries most affected by a series of negative conditions, which have imposed a severe recession and a general slowdown of economic activities. The absence of growth prospects simultaneously caused the postponement of productive investments and decreased business profitability.

With the details of the data used we can see differences and specificities of different areas and observe the influence of the economic crisis on the different variables of the credit. In the following two graphs we observe the time series of nine variables related to credit granted in Italy (2002-2012).

All values are in euro per capita, using data for population from ISTAT. In the first chart there are five types of financing over the short term, new disbursements for each quarter; in the second chart other four variables regarding the performance of the credit.



**Figure 1:** Different types of funding over the short term in Italy, per capita values in euros (2002-2012)  
 Source: Our elaborations on *Banca d'Italia* data



**Figure 2:** Four types of credit and collateral in Italy, per capita values in euros (2002-2012)  
 Source: Our elaborations on *Banca d'Italia* data

The observation of the time series of the various types of credit over the short term (Fig. 1) show that the total level has suffered a decline from 2010. Absolute values were affected by the sharp fall of investments in construction at the end of 2007, while the productive ones showed a slightly positive trend. The purchase of real estate by households and other property, had, considering the absolute values, a

stable trend, adversely affected just during the 2011-12 period. The last and largest category, all the other destinations of funding over the short term, show an upward trend until the end of 2008, and then stabilized. In the second graph (Fig. 2) are shown the growth trend of consumer credit and leasing, typically two types of credit to support consumption. Factoring showed a reversal of the trend, that was negative before 2007, probably to try to get anticipations on credits by businesses. Finally, the credit commitments, then a type of collateral by banks, it is observed in stable trend, with a sharp decrease after the third quarter of 2011. The performance of the four variables just described (Fig. 2) indicates a stop to all increments after 2007, and the emergence of a stability in 2010-11 in the values of credit specifically aimed to businesses and productive investment, due to economic recession. In summary, the proportions of credit to productive activities and investment have changed, particularly to credit addressed to maintain previous levels of consumption, otherwise in decline also for the level of unemployment. This has made possible that consumption not collapsed, with a support on GDP, but of course lacking the foundations for economic recovery.

#### **4. Data, methodology and results**

To reach our purpose, which consists in identifying the trend of granting of credit in Italian regions before and after the outbreak of the financial and economic crisis and the implicit consequences set forth in the preceding three paragraphs, we use a multidimensional scaling analysis. It is a useful tool through which it is possible to produce a graphical representation of a pattern of objects, in this case the 20 Italian regions, based on the degree of similarity/dissimilarity between them. The goal is to provide a representative map that best approximates the distances observed between the same regions, concerning the availability and the granting of credit in its various forms and purposes. This statistical method attempts to build a configuration of the various entities, merged in a small number of dimensions (two in our case). This is done by defining relations between regions in terms of proximity/distance with respect to the considered indicators. The resulting positioning map has the property to partition the regions into homogeneous groups, so as that the degree of association between two regions is maximal if they belong to the same group and minimal otherwise. We considered a matrix of 20 regions (plus the aggregated data for Italy) and indicators, representing 2 sets of variables: various types of credit extended over the short term, other important types of credit to households and businesses (see Table 1). In particular, we have selected the following indicators (source: *Banca d'Italia*): new credit disbursements over the short term (investment in construction, productive investments, real estate purchases households, real estate purchase, others), leasing, factoring, credit commitments, consumer credit. Data refer to the periods 2002-2004 and 2009-2012 (mean value for the two considered periods). Data were rescaled between 0 and 1 within each considered variable, in order to avoid possible distortions due to different ranges and magnitudes.

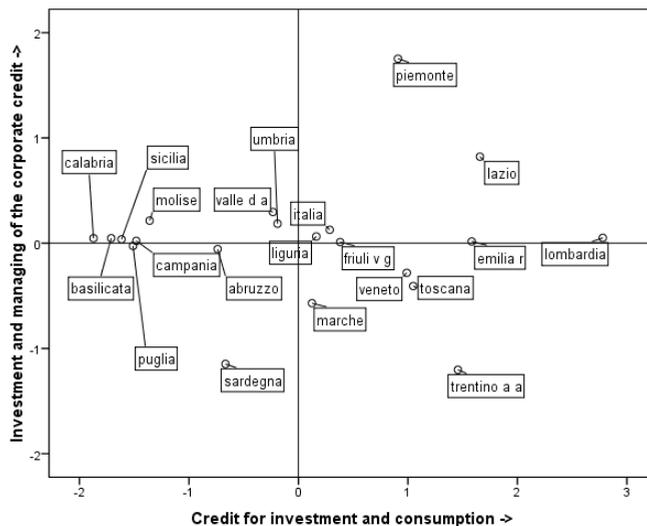
The model's goodness of fit was assessed via the RSQ (0,96 both for the first and the second considered periods), that indicates the proportion of variability explained by the corresponding dissimilarity distances, and the Stress Index (0,10 both for the first and the second considered periods). As a general rule, results are found to be robust when the size  $k$  achieves an Stress Index value lower than 0,15. A two-

dimensional model was judged to be acceptable according to the values of the previous indexes. The correlations between dimensions and variables for the two considered periods (see Table 1) were useful for naming the axes. The resulting two-dimensional images are shown in Figure 3 and 4. The horizontal axis, the most significant and representative, represents for both graphs the variables concerning the credit over the short term and the households; the vertical one is related to investment and managing of the corporate credit in the first graph, and to consumer credit in the second one.

**Table 1:** Correlations between variables and dimensions ( $r > |0,6|$ )

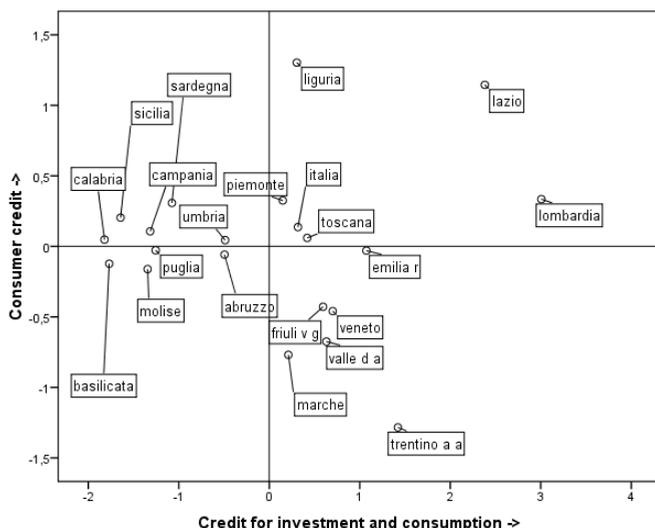
Variables	2002-2004 configuration		2009-2012 configuration	
	Dimension 1	Dimension 2	Dimension 1	Dimension 2
Invest. in construction	0,80		0,80	
Productive investments	0,62	0,70	0,79	
Real est. purc. househ.	0,92		0,93	
Real est. purchase other	0,87			
Other (over short term)	0,95		0,95	
Leasing	0,88		0,89	
Factoring		0,75	0,69	
Credit commitments	0,89		0,89	
Consumer credit	0,80			0,63

Source: Our elaborations on *Banca d'Italia* data



**Figure 3:** Cluster of regions in a two-dimensional space (2002-2004)

Source: Our elaborations on *Banca d'Italia* data



**Figure 4:** Cluster of regions in a two-dimensional space (2009-2012)  
 Source: Our elaborations on *Banca d'Italia* data

The two graphs above show the situation remained almost unchanged before (2002-2004) and after (2009-2012) the advent of the economic downturn. Observing the first dimension in both graphs, significant to understand the average values of credit to households and businesses, it shows a clear distinction between the northern and southern Italy, remained stable over time. The group of the northern regions has higher values for all types of credit, indicating a greater entrepreneurial vitality and possibility of consumption for households. Between these regions there are also outlier cases for the second dimension. In the period 2002-2004, Piemonte region has in fact high values for both the two variables considered (see Tab. 1), productive investment by firms, much higher than the national average, and factoring, also related to businesses and to the possibility to receive advances on credits. The second graph shows in particular the low use of consumer credit to finance purchases by households in some northern regions, as Trentino, Valle d'Aosta and Veneto, on average higher in the centre and south of the Country.

## 5. Conclusions

The economic crisis, emerged following the bursting of the speculative bubble in the U.S., was largely caused by previous alterations in the procedures for managing of credit by the banks.

There have been several causes, related to each other, which affected the possibility to provide credit and then to be the basis for economic recovery: interventions of the supervisory authorities, monetary policies, problems of banks' balance sheets and the general deterioration in economic activity of households and firms.

Our analysis, based on data on several types of credit concerning the Italian regions, for the period 2002-2012, has shown that there has been a contraction of credit, as expected by the theoretical and empirical studies, at least for certain types of loans,

such as those of the relevant construction sector. This restriction is due both to banks' choices, such as increasing requirements of borrowers given the increased risk of default, and also for the lack of liquidity and the stringent rules in order to avoid the risks of failures.

Other forms of credit to businesses, and even more for households, are increased after the crisis, or remained unchanged, thus marking a shift of these resources to support consumption, which would otherwise have been adversely affected by the crisis. Moreover, in Italy, before and after the outbreak of the crisis, remained a strong distinction between the southern and the northern regions, the latter with higher mean values for all the nine types of credit considered, with more possibility to receive funding, that for companies means more opportunities to invest and improve the local economy.

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# IMPACT OF ECONOMIC CRISIS ON PUBLIC SERVICES OF SOCIAL VALUE IN ROMANIA

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**Abstract:** Public services market is closely linked to the involvement of the state in economic and social life. The extent and modalities of involvement varies from one country to another, from one period to another are influenced by many specific factors concrete. With the involvement of the state in economic and social life goals should be considered or - declared or not - -especially those interventions effects on the community and individuals. The paper starts from the idea that public service education, the health care and social services ensures the physical and intellectual integrity of the individual, regardless of his income level. In democratic societies are more and more talking about education as the means of personal development, a service available to all, regardless of social class, religion, gender, and access to health care is considered a basic right of the individual. Medical services should be seen as a means by which many social objectives can be achieved in the long term (equal opportunities, financial security during illness) not as simple care of the sick. The paper includes analysis related to: the structure of social protection in our country, the scope of these services, the relationship between social protection and poverty, the way and the degree to which social protection deepens or contribute to poverty reduction. The economic crisis triggered in Europe in 2008 that also affects Romania, negatively influenced the evolution of social funds in key areas of public interest, education, health and social care. This results from: decreasing share of social spending in the state budget, decreasing share of these expenses in the total family budget due to lower purchasing power and thus the obligation of individual to reduce or waive some costs of this kind, central and local government bodies inability to meet certain service requirements such at the level of the population and especially low-income population groups. Located in the crisis situation the state must seek solutions to keep social services at an appropriate level because the quantity and quality of these services have an impact upon quality of life and standard of living of many individuals. The results of the analysis indicates us a reduced benefit for this type of service, in our country, with negative effects over the entire society. The conclusions aim to support the fact that social policy from our country is insufficient in relation to the real needs of the population, being strongly influenced by domestic economic situation and the size of the global economic crisis.

**Keywords:** public administration, economic policy, market distortion, social protection

**JEL classification:** H50

## Introduction

Services we analyzed in this paper are general and affect different population groups, constituted from the most diverse criteria. In these circumstances there are individuals and

social groups and disadvantaged, with limited access to some of these services, for reasons more or less objective.

The paper analyzes the evolution of government spending for major public social services in Romania, education, health, social insurance for the elderly through pension fund in 2008-2010. The level of state spending for such services affect the quantity and quality of services. We also made some predictions regarding state budget expenditure on this sector for 2013, based on the Government Program. The paper was developed based on the study and interpretation of statistical data provided by the specialized bodies in Romania and the European statistics regarding the situation of these services from economic crisis to the present day.

### **Research results and discussion**

Public administration has a certain mission, purpose and responsibilities that reflect upon social life. When referring to Romania where public administration is organized on two levels, central and local. The panel is composed of ministries and other central agencies and the local works being based on Romania's territorial organization, communes, towns, counties. There is a clear link between the state (government), administrative services (public) and public policy. Public services are services that provide collective benefits in the general interest of the community (army, police, justice) or directly to that benefit of the individuals (education, health, social welfare). Public policy analysis is, in general, an approach that identifies with programs of action of public authorities in a given area of activity. The term can be used depending on the items that want to be highlight (educational policy, health policy, literacy, non smoking, environmental etc). Public policy in contemporary society:

- is a group of decisions taken at different organizational levels, macroeconomic, meso and microeconomic

- Can take several forms (programs of political parties, especially with the election through legal regulations (laws, emergency ordinances, accountability, local government decisions);

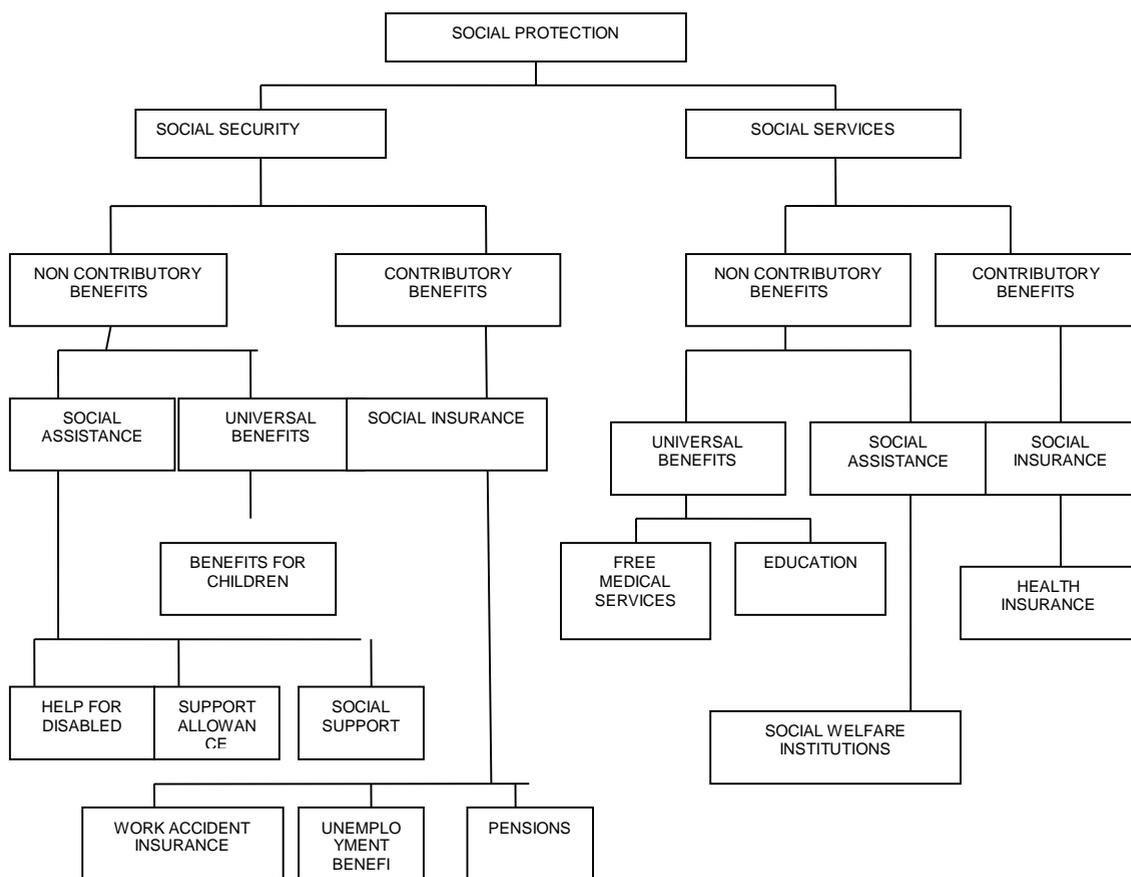
- Mobilize adequate resources to ensure the provision of these services;

follows a general-purpose oriented towards satisfaction of interests, is the carrier of certain values.

Guy Peters defines public policy as "all activities that directly or indirectly affect citizens, which operates on three levels- public election, the results of policies, policy impact" (G. Peters, 1993). Also public policy "is a set of measures taken by the legal and responsible authority that aims to improve the living conditions of the citizens ....." (Profiroiu M., 2006). The social policy is part of public policy. It consists of various benefits and social services. They are designed to cover the full range of basic needs for all segments of social, occupational or age. The ensemble of benefits forms the system of social protection that consists of:

- universalistic benefits (social services) - granted to all citizens, as "deserve goods"without being a situation of risk (compulsory free education, free health assistance)

- Services provided to disadvantaged groups to allow them to meet the minimal needs (social support of various types-for example subsidies to cover services related to utilities that can not be supported entirely from revenues).



**Figure 1- Social Protection System in Romania**

Source: author's construction based on Ministry of Finance Newsletter 2010

We chose to analyze over the work from the social security system and pension related expenditures in the state budget and from the social services the one from the health service and free education and expenditure on social and state funds but going beyond its types services.

Schematically social protection system in Romania can be outlined as follows (Figure 1).

Pension system has the main objective to provide a permanent replacement income over a certain age and protection in the event of special circumstances generating temporary work incapacity.

In Romania public pension system is mandatory, largely system "step-by-step payment." Under the new pension regulations it is proposed national pension system on three pillars:

- pillar I requires a public pension and mandatory;
- pillar II requires a public and private pensions, mandatory;
- pillar III requires private pension system, which is not mandatory.

Analyzing statistical data presented in the following table can do the following findings: number of pensioners in the period 2008-2010, declined slightly by 26,000

people, in case of pensioners from the state system was decreased with 52,000 people and in the case of farmers with 129,000 people.

**Table1** Average number of pensioners (mii persoane)

	1990	2000	2008	2010	2010/1990 (+-)	2010/2008 (+-)
Social insurance pensioners-total	3577	6110	5701	5675	+2098	-26
Social insurance pensioners (without farmers)	2570	4359	4819	4767	+2197	-52
Social insurance pensioners – farmers	1007	1751	866	737	-270	-129

Source: National Institute of Statistic (INS), Anuarul Statistic al României, 1991,2001,2007,2011

People should understand that for the future, the pension provided by social security is not enough, but is designed only to cover living expenses and therefore they must think more seriously about private pension plans. The most important issue is the level of education and information of the population, which has already begun to work, but it can be improved for the purposes of initiating campaigns on the utility, the need to use complementary private schemes that would bring the individual finally a supplementary pension. Monthly average pension represented in our country in 2010, 41.7% of the average gross wage on economy, having an average of 716 lei per month (170 euros) down from 2009 when it was 44.8%. The cause is the non index of pensions in relation to the average growth of gross salary and nor with the inflation rate. In 2010 returned in average 1.3 retirees per employee. Income from social benefits were accounted for 25.7% in 2010 from the total income of a family household (total families) having a weight differential, namely:

- 6.5% In the case of a family of employees
- 14.3% For family farmers
- 27.1% For unemployed families
- 55.2% In the case of pensioners

These revenues increased compared to 2008, when they represented 21.6% of total income of a household. In the case of employees were 5.3%, 22.6% the unemployed, 49.5% of pensioners being smaller in the case of farmers, only 15.1%. A certain level of income may be an indicator for assessing the degree of poverty thus poverty level can be assessed according to the size and average monthly income / family. In Romania, in 2010:

- 26.9% of families had a monthly income of up to 349 lei meaning 82 euro / month on witch revenues / day for a person were euro 2.73;
- 37.1% of the families had a monthly income of up to 434 lei, meaning 102 euro, and the daily income per person was 3.4 euro
- 16.5% of the families had an income of over 1,048 lei per month, meaning 244 euro, the average / person. So a daily income of 8.24 euro.

Level of these revenue highlights an increase of the gap between rich and poor, Romania being found among the nations with the highest level of poverty in the EU, 29.4% of all households. Ratio between average daily income / person from the best situated families meaning 89.24 euro and those with the lowest income 2.73 euros was 3/1. Compared with our country, the poverty level in the EU is as follows:

- Less than 5% of the poor population was register in Sweden, Finland, Denmark, the Netherlands, Austria, Spain;
- Between 5-10% poor population-Great Britain, France, Czech Republic, Slovenia, Portugal, Estonia;
- Between 10-20% - in Poland, Hungary, Slovakia, Greece, Lithuania;
- Over 25% poor population, Romania, Latvia, Bulgaria

Poverty varies from one European country to another and therefore has no value in euro / person. (Adevarul 6853/10.01.2013)

The poverty level in Romania is also confirmed by statistical data from semester 3 of 2012:

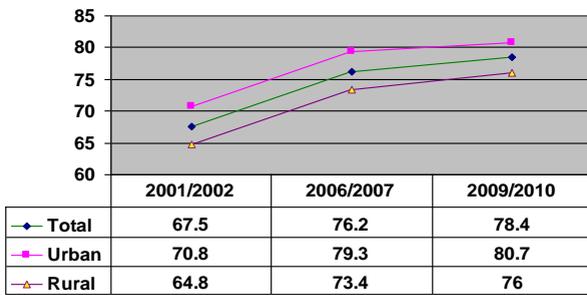
- Average monthly income / household was 2457 lei, meaning 551 euro and 856 lei/ person, meaning 192 euros.
- Per person income in Euros / day was 6.4 euros.
- Expenses of the households in the same quarter represented 90% of total revenues, highlighting a different facet of poverty, the level of these expenses increased by 5% compared to Quarter 3 of 2011. (Adevarul 6852/09.01.2013 and preliminary data NSI 2011).

The economic crisis has affected education services. In no year after 2008 the education did not receive accordance with the provisions 6% of GDP but much less, meaning 3.6% in 2008-2010. The share of education spending in GDP during this period placed Romania on the place 38 of 41 states recorded statistically in the countries of Central and Eastern Europe that allocated a higher percentage of GDP for these services-Estonia-6, 1% Latvia-5, 8%, Hungary-5, 5%, Bulgaria-4, 7% and well below the level of advanced EU countries: Cyprus-7, 9%, Denmark-7, 77%, Ireland-6, 6 %, Belgium-6, 4%, Sweden-6, 5%, Belgium 6.4%. etc. (INS Statistical Yearbook of Romania 2011). Analysis of statistical information about the education system in the range 2008-2010 allowed us to draw the following conclusions:

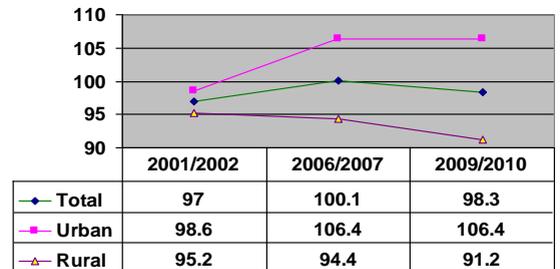
- Has decreased the number of administrative and auxiliary staff from education but also teaching staff from primary, secondary and vocational education, the trend was highlighted in the academic year 2010/2011.
- The share of skilled personnel is however an upward trend;
- Report student / teacher ratio was 11 pupils / teacher ratio in secondary education to 17 students / teacher in preschool and primary education;
- Overall school population of Romania is declining (and population);
- More and more children are pre-school (91% of children that entered first grade attended kindergarten);
- Almost 80% of school-age population 7-23 years is included in the educational system;
- The last three years participation in higher education;
- Participation rate of adults, 25-64 years in education and training is decreasing, in 2008 it was 1.6%, four times lower than the EU average (Government of Romania, Report on the educational system in 2010 ).
- the material and educational services in rural areas are the most affected by spending cuts in this area.

Material facilities rural education, expressed in quantitative terms, does not seem unfavorable, but in qualitative terms only the analysis in qualitative terms highlights the serious issues of educational services from rural and the gap between this type of services provided in rural and urban areas. In most part of the communes (90%), the educational process is carried up to secondary school level (in some cases only

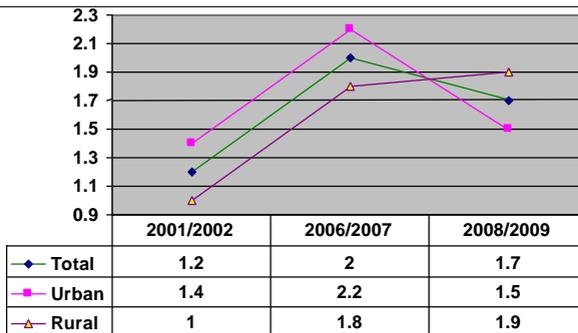
up to primary level), institutions of secondary or post-secondary level are very reduced in number from rural. Under these conditions rural students travel long distances to attend secondary school in some communities or towns in the area. School drop registered in rural areas is mainly due to increasing poverty in rural areas. Statistics on school attendance in rural areas has enabled us to draw the following synthesis, expressed graphically.



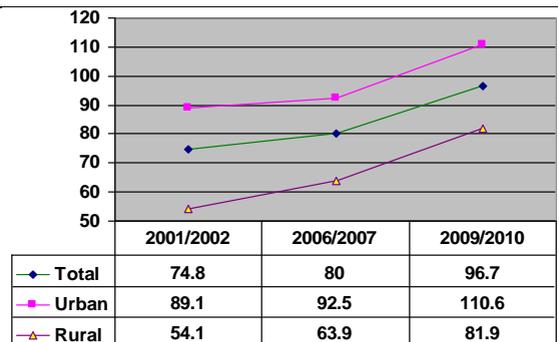
**Grafic nr.1**-Gross rate enrollment in early education in rural and urban



**Grafic nr.2**-Gross rate enrollment in primary and secondary education in rural and urban



**Grafic nr.3** -The dropout rate in primary and secondary education



**Grafic nr. 4**-The dropout rate in secondary and vocational education

Source:\*\*\* Government of Romania, 2010 Report on the educational system

Analysis of free medical assistance services and health infrastructure were influenced between 2008-2010

- Departures from state health system of numerous medical professionals
- closure of hospitals and health centers, especially in rural areas or smaller towns, especially after 2010.

Health expenses for in 2010 were accounted for only 2% of total expenditures. In the same year came back 24.4 physicians to 10.000 inhabitants and 6.2 beds in hospital per 1,000 inhabitants.

Between 2008-2010 the evolution of medical personnel was as follows:

**Table 2** Evolution of sanitary personal

<b>Denumire</b>	<b>2008</b>	<b>2010</b>	<b>2010/2008 +-</b>
Inhabitants/Doctor	428	411	-17
Doctors at 10.000 inhabitants	23,4	24,4	-1
Inhabitants/Farmacists	1837	1573	-264
Farmacists at 10.000 inhabitants	5,4	6,4	-1
Inhabitants/ ward staff	162	169	-7
Ward staff at 10.000 inhabitants	61,6	59,1	-2,5
Ward staff/doctor	2,6	2,4	-0,2

Source: National Statistics Institute, NSI, Romanian Statistical Yearbook 2011

Current government program for 2013 takes into account registration of slight progress or maintain the same level of social expenditure, taking into account maintenance or slight reduction of the phenomenon of economic crisis. According to the national budget, the total GDP of Romania planned for 2013 will be 140 billion euro, of which social security benefits will be at the following levels:

- Pensions Euro 11.2 billion or 8% of GDP;
- Health 6.2 billion euros--4, 43% of GDP;
- Education and Research, 4, 4 billion euros. -3, 14% of GDP;
- Social insurance and social assistance-16, 5 billion euros -11, 78%.

Share of spending will be 46 billion euros. Euros, or 32.85% of GDP and total expenditure budget will be 49 billion difference being covered by the budget deficit.

The share of social expenditure in total budget will be:

- Social security and social assistance-33, 67%
- Expenses for health-12, 65%
- Education and research-8, 97%.

Calculated per capita (population about 20 million people), a GDP of 7,000 / inhabitant. the following data:

- Social security and social assistance-825 / person;
- Expenses for health-310 / person;
- Education and research-220 / person

The three groups of expenses totaling 1355 euros and will represent 19.35% of GDP / capita.

### **Conclusion, proposals, recommendation**

1. The paper analyzed the main trends in the evolution of social expenses in the period after 2008 the education, given the economic crisis event in Romania.

2. Processing and interpretation of statistical data allowed us to notice that our country is among the poorest EU member countries:

- level-in terms of GDP / capita
- The share of social spending in total GDP and / capita;
- share of social expenses in total budget expenses;
- Average income / household and / person

3. The study reveals the slow pace of poverty reduction in the gap between the level of welfare in Romania and the EU average.

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[www.ministerul finantelor.ro](http://www.ministerul_finantelor.ro) - Access 18.12.2012

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# APPROACH OF RDI SYSTEM IN EUROPEAN UNION IN THE LAST DECADE

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**Abstract:** *Present paper present an approach of the Research-Development and Innovation System (RDI) in Europe during the last decade. After a short introduction is presented the European Union formation. Research, development and innovation (RDI) has been studied and analyzed since 2001 by the European Innovation Scoreboard (EIS). Will be presented in the present paper a summary of all the materials from EIS 2001 till IUS 2011. Study concerning RDI system in Europe was done from innobarometers from 2001 till 2010. EIS2007 presents for the first time the European innovation leaders. EIS presents innovative performance of Member States based on annual statistical data collected from national statistical sources of each member country of the European Union through the Community Innovation Survey by using Document Analysis on Innovation Community. Were taken into account, after this short presentation, the relevant composite indicators for European Union for the last decade to analyze the Research-Development and Innovation System in Europe. IUS2011 distinguish between three main types of innovation indicators. The main input factors in the analysis of external innovation performance of firms covers 3 dimensions of innovation. These indicators, based on the IUS2011, contain as follows: Human Resources with the evolution of new doctorate graduates, population completed tertiary education, youth with upper secondary level education, Research Systems, Finance and Support. All of these indicators belongs to the category of Enablers. Another indicators studied in the present paper are Firm activities, Linkages & entrepreneurship Intellectual Assets. From the category of Outputs there are Innovators and Economic effects. The composite indicators for EU Research Development and Innovation System were study for the period 2006-2011. Samples data were took from Pro Inno Europe database for simulations in August 2012.*

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**Keywords:** *Economic Development, Institutions and Growth, Europe, Institutional, Research Development and Innovation System*

**JEL classification:** *B25, O43, O52.*

## 1.Introduction

Present paper will make an analysis of the research development and innovation activities in European Union in the last decade.

Lisbon strategy introduced in 2000 was meant to transform by 2010 the European Union into "the most dynamic and competitive-based economy in the world" (Lisbon Strategy, 2000). A knowledge-based economy is a basic factor to strengthen the competitiveness of that economy. Economic growth is the increase of activities and their results in the national economy are closely linked to factors contributing to this

increase. Economic growth is interpreted as a positive development trend of macroeconomic outcomes expressed by the dynamics of macroeconomic activity results in real terms. Macroeconomic dynamics is correlated with demographic dynamics. Macroeconomic indicators are related to the total population. Economic growth is measured by the growth rate of GDP, the gross national product or national income per total and per capita. Economic growth is seen as a long-term process. It is the growth of potential output and potential output. Growth potential depends on existing resources and how they are made (Dachin&Popescu, 2009).

Economists and economic historians from Adam Smith raised the question of national economic growth. They wondered why some countries grow more rapidly? If these countries have the necessary capabilities for sustainable growth? Makes them more competitive in some countries than others and why some become richer than others? Attention has shifted from growth problems in the allocation of resources. The theory of firms comparative growth was first introduced in the works of Downk in 1958, Penrose in 1959 and Marris 1964. This was treated as a sub-branch of the industrial economy, which was a theoretical relationship between the firm and markets. Competitiveness is studied to understand whether the necessary capacity for sustainable growth in a competitive environment made internationally. Competitiveness is studying environment there are other countries, groups or individual companies. It is studied differentiated set of capabilities appropriate for each savings share. (Cantwell, 2006).

Present paper present an approach of the Research-Development and Innovation System (RDI) in Europe during the last decade. After a short introduction is presented the European Union formation. RDI has been studied and analyzed since 2001 by the European Innovation Scoreboard (EIS). Was presented in the present paper a summary of all the documents from EIS2001 till IUS2011. Study concerning RDI system in Europe was done from Innobarometers from 2001 till 2010. Were taken into account, after this short presentation, the relevant composite indicators for European Union for the last decade to analyze the Research-Development and Innovation System in Europe. IUS2011 distinguish between three main types of innovation indicators. The main input factors in the analysis of external innovation performance of firms covers 3 dimensions of innovation. These indicators, based on the IUS2011, contain as follows: Summary Innovation Index, Human Resources, Research Systems, Finance and Support, Firms investments, Linkages&entrepreneurship, Intellectual Assets, Innovators, Innovators, Economic effects for European Union (Source: <http://www.proinno-europe.eu/metrics>).The composite indicators for EU Research Development and Innovation System were study for the period 2006-2011.

## **2.A short aproach of RDI system in EU during EU formation**

European Union (EU) is an economic and political union consisting of 27 member states which are located primarily in Europe. In 1951 was founded the European Coal and Steel Community (ECSC). In 1958 was established the European Economic Community (EEC). In 1957 EU6 is formed, the first form of existence of the EU.

EU6 was formed in 1957 from the following countries: Belgium, France, West Germany, Italy, Luxembourg, Netherlands. When EU6 was created in 1957, had a total population of 169,106,736 inhabitants, comprised an area of 1,299,536 km<sup>2</sup>.UE6 have a GDP of \$ 1.123317 trillion and a GDP/capita of \$ 6,643. In

1973 EU9 was formed with Denmark, Ireland, UK in addition to EU6. EU9 thus formed, which has a population of 256,762,106 inhabitants, an area of 1,657,723 km<sup>2</sup>, a GDP of U.S. \$ 3.148472 trillion, or a GDP / capita of \$ 12,262. In 1981 Greece joins the EU, thus forming the EU10. Population grew by 3.72% and reached 271,472,541 people. Area increased by 7.96% from 1973, to EU9. Even if the total GDP of the newly formed EU10, increased by 2.34% to 3.781111 trillion \$ GDP/capita fell by 1.33%. In 1986 Portugal and Spain joined the EU and they make the EU12. The two countries have led to an increase in GDP of the EU to 11.29%. GDP/capita decreases by 5.51% to the value of \$ 14,468 / capita. Population grew by 17.53% and EU12 area increased by 33.37% to 2,386,841 km<sup>2</sup>. In 1995 to the EU12 joins Austria, Finland and Sweden, forming EU15. GDP per capita increased by 0.2%. EU15 population increases by 6.28%, the area increases by 34.95% and EU15 GDP increased by 6.5%. In 2004 another 10 countries join the EU15 and formed EU25. These are: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia. These 10 countries contribute to population growth by 19.5%, thus EU25 population reached 456,504,305 inhabitants. Surface increases by 17.97% and becomes 4,104,844 km<sup>2</sup>. EU GDP increases only 8.88% and reached \$ 8,396,994,000,000 of, but GDP per capita decreases by 8.94%, making him \$ 18,394 /capita. In 2007 Romania and Bulgaria join the EU and thus form the EU27. These two countries contribute 2.04% to EU GDP in 2007 which became worth \$ 12,436.80 billion and GDP per capita decreases by 4.03% and becoming in 2007, \$ 25,160.59 / capita. EU area increased by 6.48% in the two countries, reaching 494,296,878 inhabitants and the area is 4,454,237 km<sup>2</sup> and in EU27 is increasing to 8.51%. In 2011, the EU27 has a population of 502,486,499 inhabitants and EU GDP of \$ 15,788 billion and a GDP/capita of \$ 31,548.

(Source: <http://epp.eurostat.ec.europa.eu>)

Research, development and innovation (RDI) has been studied and analyzed in the present paper since 2001 by the European Innovation Scoreboard (EIS). EIS2007 presents for the first time that EU innovation leaders. EIS presents innovative performance of Member States based on annual statistical data collected from national statistical sources of each member country of the European Union through the Community Innovation Survey (Document Analysis on Innovation Community). European Innovation Scoreboard (EIS) is a document that contains information about: performance of Research Development and Innovation (RDI) in Europe. I took and studied every document since EIS2001 to IUS2011 respectively Inobarometers from 2000 to 2010. Next I will present a brief summary of the 22 official documents downloaded from the official website of the EU: <http://www.proinno-europe.eu/metrics>.

EIS2001 is the explicit answer of European Council meeting in Lisbon, establishing that the European economy have to be a dynamic, knowledge-based, social cohesion respectively. It was established that the RDI European area naem to be ERA (European Research Area). Statistical analyzes are made here for 17 indicators in 4 areas, such as human resources, knowledge creation, transmission and application of new knowledge, financial innovations and marketing results. Analyses are performed for 1999 and 2000. In the 2001 report states that leaders of innovation in Europe are Finland, Sweden, Denmark. These countries have enormous potential for RDI. All member countries improve their innovation performance. UK achieved the fastest way. Just manages of Denmark, Finland, Greece, Luxembourg and Spain, which are now entering countries in the catching-

up category. Many indicators regarding RDI in Europe are heavily influenced by public policies and strong investment in RDI or in achieving tertiary education especially after 1996.

Innobarometer 2001 examines the experiences and priorities of European managers on innovation activity. According to European managers, innovation is widespread, but it is a slow development. It appreciates the importance of innovation in most businesses. Adequate human resources, active contacts with customers and suppliers, and sharing knowledge with other innovative companies are considered important elements of innovation. However, tax incentives for innovation are considered insufficient in most EU countries. On the other hand, most of the directors claim that customers have a favorable attitude towards innovation. German customers are regarded as being particularly exposed to innovative products.

EIS2002 complete a survey of a new field of innovation, biotechnology and introduce the methodology for reporting the status of innovation in Europe in 2002.

Innobarometer 2002 examines European companies, which slowly but continuously strengthens their innovative activities between 2001 and 2002. Skilled workforce with the knowledge and skills necessary for a strong performance in innovation is regarded as essential in this context. Innovative market access are considered too. Another trend is observed in the period under investigation is that more and more companies took part in the increasingly public debate on innovation. Is highlighted the importance of cooperation between enterprises.

EIS2003 analyzes RDI achieved in the EU in 2003. Technical data indicate important economic issues such as: definitions of economic indicators that characterize the European Innovation at a time, analyze the performances. The results presented in the EIS documents include current data and trends, determining what innovation leaders, weaknesses and strengths of each country component of the EU. Analyses were performed for regional development, respectively for 173 regions from 13 Member States in 2003. Were studied on this occasion 9 structural indicators and 14 indicators of socio-cultural and institutional background specifying the conditions for innovation activities in each EU Member State. Was done on this occasion description of the methodology for calculating the summary innovation index SII (Summary Innovation Index) for each country.

Innobarometer 2003 reveal that the number of EU companies that have engaged in innovative activities increased from 2002 to 2003. An important factor is the consumers that encourages companies to innovate. Generators of research and development are the engines of innovation. Managers see globalization as an opportunity to innovate and are optimistic about the benefits of innovative efforts. At the same time is seen favorably European dimension of innovation issues such as the community patents.

EIS 2004 contains information about the candidate and who tend to join the EU, their Performance for RDI -business activities. EIS2004 includes a database with information on each economic indicator which characterizes RDI. This information is presented for each country component of the EU. This information presents the ways of achieving RDI, diversity, innovation feature of market knowledge flow, investments in RDI, innovation in governance respectively. Indicators study covers the period 1993-2004. Countries for which was made the analysis are: Austria, Belgium, Germany, Denmark, Greece, Spain, Finland, France, Ireland, Italy, Luxembourg, Netherlands, Portugal, Sweden, UK, EU15, Cyprus, Czech Republic, Estonia,

Hungary, Lithuania, Latvia, Malta, Poland, Slovenia, Slovakia, EU25, Bulgaria, Romania, Turkey, Iceland, Norway, USA and Japan.

Innobarometer 2004 seeks public support measures for innovation programs from a business perspective. This analysis includes 25 Member States. Analysis is performed for 4,500 innovative companies with a number between 20 and 500 employees. Through Innobarometer 2004 is the innovation performance of Member States and associated countries. One third of EU's innovative companies use at least one form of public support for their innovation activities. However, few companies use public support for innovation, for which they are eligible, which shows that further improvement can be achieved in terms of coverage of public initiatives. It was found that the Cypriot and Austrian firms are most active. Companies from new member states use less public support for innovation.

2005 EIS presents results of RDI activities and reporting methodology used in this year. This is how to assess and compare the innovation performance of EU countries and USA. There are also studies of the weaknesses and strengths of innovation results and economic performance of the EU Member components.

Innobarometer 2005 analyzes how people are ready for innovation in 2005. It is analyzed here how europeans define innovative products and services and the extent to which people are drawn these. This information was used to evaluate the overall innovation. It appears that Malta and Slovakia are Member States with the highest proportion of citizens pro-innovation. Many other countries are in the same situation. Citizens of Poland and Latvia are not prepared to accept the innovations. A study was conducted where three from five citizens of these countries are classified as "anti-innovation" or "reluctant". Peoples "anti-innovation" are in Greece, Cyprus, Portugal, Bulgaria. Most EU citizens more innovation associated with creating new products or services, improve existing ones. The vast majority of European citizens said that they feel attracted to innovative products or services.

EIS 2006 includes innovation indicators. Trends analysis is performed here for innovation in EU25 Member States plus the two new Member States: Bulgaria and Romania, and Croatia, Turkey, Iceland, Norway, Switzerland, USA and Japan. Corresponding Annex of EIS2006 contains tables with definitions and datas for each country. EIS2006 report and its annexes are accompanied by thematic papers and corresponding indicators database. In EIS2006 there is a comparative study between EU, USA and Japan, countries where RDI has important results.

Innobarometer 2006 presents descriptive information on the concepts of membership in a particular cluster and cluster impact on the economic competitiveness of Europe. Study finds that corporate managers are generally aware of the relatively new concept of clusters of companies, especially in the old Member States. It was found that EU action is placed in a cluster consisting of at least 4 companies with at least 20 employees. They are characterized by close cooperation with other local businesses and close links with local business infrastructure. The highest density of clusters is in UK, Ireland and Latvia. The benefits of belonging to a cluster are in the category of human resources, entrepreneurship and partnership development. Three quarters of business leaders strategic component clusters in the EU considers strong competition and competitiveness generator, which ensures the success of clusters. Companies operating in the cluster are more innovative. Public authorities has an important role in supporting clusters (Source: <http://www.proinno-europe.eu/metrics>)

EIS 2007 include RDI indicators and trend analysis of the EU27 Member States. Data presented here are for EU27, Croatia, Turkey, Iceland, Norway, Switzerland, Japan, USA, Australia, Canada and Israel. For the first time were included in these types of analyzes Australia, Canada and Israel. Is made here a comparison between EU member states of these countries. This year EIS analyzes the RDI services, factors influencing innovation performance and efficiency. EIS2007 reflect analyzes of seven years of experience in benchmarking countries of RDI.

Innobarometer 2007 refer to the transfer of innovation. Here is how companies innovate, role-based innovations RDI innovations made without research and development process. Innovation can be outsourced or transferred to other companies or organizations. In a number of Member States of the EU and Norway and Switzerland intensive industries are selected to be involved in innovation. It requires that innovation process is involved in about nine of ten companies. In Finland, Hungary or Sweden every euro is spent on RDI. Innovation leads to increased turnover. Innovative companies are successful. The figures do not indicate that innovative companies that have a turnover which has been growing in recent years. Innovation is more characteristic for larger firms.

EIS 2008 provides a comparative assessment of the innovation performance of EU Member States, in accordance with the Lisbon Strategy. Revised methodology for EIS2008 is compared to 2007. The focus is increasingly on services, the non-technological innovation outcomes. Analyze temporal trends based on changes in the absolute values of the indicators for five years. Previous approach to innovation trends were performed by measurements made in relation to the EU average.

In 2008 it was realized no innobarometer.

EIS 2009 monitor the implementation of the "Europe 2020" strategy. The EU is seen as an Innovation Union. Provides a comparative assessment of the innovation performance of the EU27 Member States. Are presented the strengths and weaknesses in RDI systems. Studying innovation in the European Union can be seen next event at European level thus created groups of countries were was identified by computational methods of group clustering such as Ward method, the method connection between groups, the method links inside groups, nearest neighbor, farthest neighbor, median and central clustering methods (Source: <http://www.proinno-europe.eu/metrics>).

Innobarometer 2009 made a profile of innovative companies which are coming from innovative intensive sectors, with at least 20 employees, based on innovation as the primary source of income. Hungary has the most companies which have innovation. In Cyprus and Finland there are many companies that are dependent on innovation as the main source of income. Were introduced in 2006-2008, innovations for products, services, processes, marketing strategies, organizational changes. Companies from Slovenia, Finland, Switzerland and Sweden have introduced at least one type of innovation. Hungary and Bulgaria were at the lower limit on the introduction of innovations. Expenditure done for machinery, equipment or software was the most common form of innovative investments. Most companies had a stable budget for innovation or stagnation due to inflation from 2006, 2008 and 2009. Direct effects of the economic crisis in this period did not result in any changes in RDI expenditures. Production companies of high-tech increased RD expenses during the period of growth stagnation. A large number of companies at the border of UK, Spain, Poland supported innovation activities, but not France, Germany and Italy. Slovenia, Cyprus, Ireland and Luxembourg had intense international activities to support

innovation. Businesses operating across borders within the EU have supported innovation in the EU, especially in high-tech manufacturing sector, which most demanding customers. Companies in this category have received income from sales of innovative products and services. Public policies can influence innovation activities too.

IUS 2010 analyzes the innovation in EU27. The new tool is designed to help monitoring and implementing the "Europe 2020" strategy which provides innovative performance EU27 Member States and the strengths and weaknesses of RDI systems. IUS2010 conclusions on relationship between performances of RDI countries competitiveness are: 1. Innovation Leaders: Denmark, Finland, Germany, Sweden showing performance significantly above that of the EU27; 2. Innovation Followers: Austria, Belgium, Cyprus, Estonia, France, Ireland, Luxembourg, the Netherlands, Slovenia and the UK have a performance close to that of the EU27; 3. Moderate innovators are: Czech Republic, Greece, Hungary, Italy, Malta, Poland, Portugal, Slovakia and Spain is below that of the EU27; 4. Modest Innovators are: Bulgaria, Latvia, Lithuania and Romania for the innovation performance is well below that of the EU27. Bulgaria, Estonia, Malta, Romania, Portugal and Slovenia are leading growth, with an average annual growth rate of more than 5%. (Source: <http://www.proinno-europe.eu/metrics>)

Innobarometer 2010 found main effects of innovations in public administration. At EU level, two-thirds of public administration introduced a new or significantly improved service in the last 3 years. Innovation in services increased probability proportional to size institutions both public and private ones, which were observed in the leading innovators in public sector organizations. Process leading innovators were usually large organizations of national or central type. The most important engine for innovation in the public sector was the introduction of laws and regulations. Major sources of innovation is based on ideas from staff, management ideas, ideas from customers or users. Were introduced innovative practices from the bottom up. Was mentioned managerial support for testing ideas for the process error. (Source: <http://www.proinno-europe.eu/metrics>)

IUS 2011 include indicators of innovation and trend analysis for the EU27 Member States as well as Croatia, Iceland, the former Yugoslav Republic of Macedonia, Norway, Serbia, Switzerland and Turkey. This includes comparisons between EU27 and other 10 countries worldwide. The main data analysis of external innovation performance of firms covers 3 dimensions of innovation as follows: human resources, open, excellent and attractive research systems, and finance and support. Business activities refer to efforts made at the company's innovation, innovation grouped into three dimensions: investment firms, linkages and entrepreneurship and intellectual assets. The results refer to effects on innovation activities of firms in innovation, which are the two dimensions: innovators and economic effects (Source: <http://www.proinno-europe.eu/metrics>).

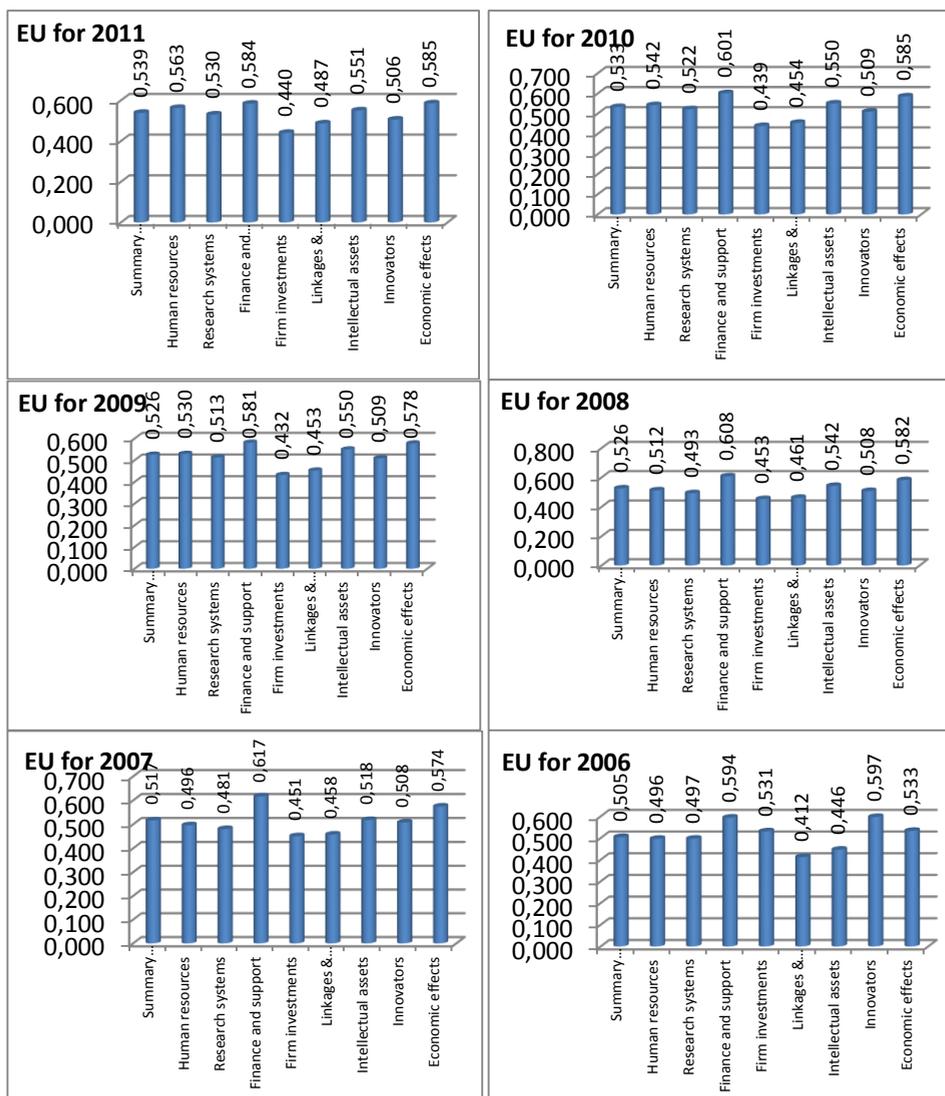
### **3. Analysis of relevant indicators for European RDI systems**

IUS2011 distinguish between three main types of innovation indicators. The main input factors in the analysis of external innovation performance of firms covers 3 dimensions of innovation.

Figure 1 contain composite indicators for EU for the period 2006-2011. These indicators, based on the IUS2011, contain as follows: Summary Innovation Index, Human Resources, Research Systems, Finance and Support, Firms investments,

Linkages&entrepreneurship, Intellectual Assets, Innovators, Innovators, Economic effects for EU (Source: <http://www.proinno-europe.eu/metrics>).

Summary Innovation Index (SII) gives an overview for the moment of aggregate national innovation performance. This is an indicator which has the highest value in 2011 respectively 0.539 and the lowest value in 2006 as 0.505. The SII is calculated using the most recent statistics from EUROSTAT and other internationally recognised sources as available at the time of analysis, as in IUS2011. As a consequence the SII does not capture the most recent changes in innovation performances, or the impacts of policies introduced in recent years which may take some time to impact on innovation performance. Human Resources present the evolution of new doctorate graduates, population completed tertiary education, youth with upper secondary level education. This indicator has the highest value in 2011 respectively 0.563 and the lowest value is 0.496 obtained in 2006 and 2007. Research Systems present the evolution of international scientific co-publications, scientific publications among top 10% most cited, non-eu doctorate students. This indicator has the highest value in 0.530 in 2011 and the lowest 0.481 registered in 2007. Finance and Support present the evolution of public RDI expenditure and venture capital. This indicator vary between 0.617 in 2007 and 0.581 in 2009. All of these indicators belongs to the category of Enablers. To the Firm activities belongs: Firms investments with evolution of RDI Business expenditure and Non-RDI expenditures. This indicator vary between the lowest value of 0.440 registered in 2011 and 0.531 which is the highest value registered in 2006. Linkages & entrepreneurship present the evolution of SMEs innovating in-house, innovative SMEs collaborating with others, public-private co-publications. This indicator vary between 0.412 in 2006 and 0.487 in 2011. In the category of Intellectual Assets is presented the evolution of PCT patent applications, PCT patent applications in societal challenges, Community trademarks, Community designs. This indicator vary between 0.551 registered in 2011 and 0.446 in 2006. From the category of Outputs there are Innovators with evolution of SMEs introducing product or process innovations, SMEs introducing marketing/organisational innovations and Economic effects with evolution of Employment in knowledge-intensive activities, Medium and high-tech product exports, Knowledge-intensive services exports, Sales of new to market and new to firm innovations, Licence and patent revenues from abroad. Innovators is an indicator which vary between 0.597 in 2006 and 0.506 in 2011. Economic effects is an indicator which vary between 0.533 in 2006 and 0.585 in 2011.



**Figure 1:** Composite indicators for EU during period 2006-2011. (source: <http://www.proinno-europe.eu/innometrics/page/innovation-union-scoreboard-2011>).

#### 4.CONCLUSIONS

The relevant composite indicators analysis for the European Union RDI system covers the next dimensions of innovation as follows: human resources, open, excellent and attractive research systems, finance and support respectively. Entities that carry out RDI activities refers to efforts made for innovation at the firm level, but also at public level too. They are grouped into 3 dimensions of innovation: investment firms, linkages and entrepreneurship and intellectual assets. The results of such analysis concerns the effects on innovation activities, which are: innovators and economic effects. For this reason all innovation leaders should have high values

for RDI expenditure for the categories of business, innovation, human resources, finance and support and firm investment. All innovation leaders should have high values for publications made in public-private partnerships, publications made at 1 million people, suggesting good links between fundamental science and business. All top European innovators must excel in marketing technological knowledge, which can be seen from their performance on foreign income from licenses and patents. Good overall performance of innovation leaders should reflect a balanced national research and innovation. Effects are improving business innovation innovative public administrations. They improved working conditions and employee satisfaction. Human resources can support innovation. Future trends are increasing the number of public sector organizations in the EU27 introducing innovations.

This analysis is done in correlation with all the RDI documents from EIS2001 to IUS2011 and Innobarometers 2001 to 2010.

The main findings from the present study are: that Human Resources and Research Systems are increasing in the last decade. Finance and Support present the evolution of public RDI expenditure and venture capital is an indicator which has the highest values in 2007. The indicator Firm shows an increase in the last decade. Intellectual Assets which present the evolution of PCT patent applications, PCT patent applications in societal challenges, Community trademarks, Community designs is an indicator which show an decrease in the last decade. Innovators shows an decrease in the last decade and Economic effects shows an decreasing variation in the last decade.

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# THE MAIN DEFICIENCIES IN THE IMPLEMENTATION OF THE SECTORAL OPERATIONAL PROGRAMME HUMAN RESOURCES DEVELOPMENT

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**Abstract:** *The absorption of EU funds for Romania is a necessity in the nowadays context. The slow pace of absorption of these structural funds earmarked for Romania as EU member state is a deficiency with negative effects on the economic and social development of our country. Their low absorption shows deficiencies in their coordination and implementation at central level and also at the level of beneficiaries. Their coordinative authorities, in particular the Managing Authority of Structural Instruments, together with its subordinated institutions presents deficiencies in their coordination and implementation as having negative effects on their absorption. The main weaknesses identified on national level mainly consist in the lack of specialized personnel, in excessive bureaucracy and a mismatch of national legislation with the European one. The lack of transparency and change is specific to these structural funds, representing deficiencies that lead to beneficiaries' discouragement to implement projects financed from structural funds. In the Sectoral Operational Programme, the Human Resources Development Program is a leader in the rate of absorption but it also has the largest number of problems and deficiencies in implementation. Due to the deficiencies identified by the auditing European Commission of the Sectoral Operational Programme Human Resources Development, payments were suspended for a period of four months. Following this situation, it was necessary to implement the necessary corrective measures at the level of POSDRU, leading to its release. Taking action and removing the deficiencies at the POSDRU level, and also at the level of other operational programs, it is a necessity and a priority to increase the absorption of these funds. The main measures that need to be taken mainly consist of training the personnel involved in the management of these funds, reimbursements release funds to the final beneficiaries, creating a more transparent system of evaluation of proposals and a better correlation of national legislation with the European one. The challenge is to implement measures identified and increase the absorption of structural funds until the end of their deployment.*

**Keywords:** *absorption of structural and cohesion funds, deficiencies in the implementation of structural and cohesion funds, measures to improve the management of structural instruments.*

**JEL classification:** R11, R58

## Introduction

Romania currently receives grants allocated by the European Union through the Structural Instruments, namely the Structural and Cohesion Funds.

Although the present economic situation in Romania is poor, being in a continuous economic crisis and these funds represent an opportunity for growth and survival

and survival for the organizations regardless of their form and type, the absorption level of these grants is quite a low one, of 13.05% at 31 March 2013.

The low level of absorption of these funds indicates their ineffective implementation at the national level. This implementation is inefficient due to the lack of experience of Romania in their implementation which causes problems in their implementation both at the national level and at the level of final beneficiaries.

The identification of key issues and adoption of measures for their removal is an essential condition for attracting these grants with positive effects on the national economy.

Given the fact that nowadays we are at the end of the implementation of these structural and cohesion funds, the overall rate of absorption is very low, we were supposed to have had the absorption rate around 60% interim payments from the European Union.

In order to determine the main issues that led to this low absorption rate, an overall and specific analysis is required for each program. Because the Sectoral Operational Programme Human Resources Development is one of the programs with an average absorption rate, an analysis identified the main difficulties in implementing this program at the macro - management authority level, which cause deficiencies and at micro level - final beneficiaries, is appropriate and necessary. According to the "State absorption of Structural and Cohesion Funds, on 31 March 2013, Operational Programme ", POSDRU has a 37.10% share of domestic payments to beneficiaries and 13.08% interim payments from the European Union to Romania from the initial allocated budget.

## **Content**

In order to determine the main weaknesses which led to such a low absorption rate, allocated grants by the POSDRU, an analysis is required at the level of direct beneficiaries of these projects and reports on their implementation and co-ordination is issued by the competent authorities at the EU.

The low degree of absorption is the main indicator that signals the existence of problems in the implementation of grant programs. The degree of absorption is determined by the capacity of absorption on both macro and micro level. The absorption capacity is given by the authority of a member state to spend financial resources from the structural funds in an effective way, targeting three areas:

- Macroeconomic absorption capacity, defined and measured in terms of GDP (limited to 4%);
- Financial absorption capacity, defined as the ability of co-financing programs and projects supported by the EU, to plan and guarantee these contributions in their multi-annual national budget and collect contributions from partners involved in various programs and projects;
- Administrative capacity, which is the ability and competence of central and local authorities to prepare adequate programs and projects in a timely manner, as well as ensuring the coordination with the partners involved, compliance with administrative and reporting requirements, funding and monitoring the implementation of programs and projects and also, avoidance of irregularities.

Given the definition of absorption capacity specified above, we can assume that it is mainly influenced by managerial and administrative capacities of co-financing. The relationship between the absorption capacity of structural funds and regional economic situation is at least a paradoxical practice demonstrating that the most

disadvantaged regions facing the greatest difficulties in absorbing these funds, although the need for financial support for the restructuring of the economy is paramount in these regions. The main explanation for this phenomenon is given by two factors: on the one hand, the difficulties faced by regional authorities due to lack of experience and skill, followed by slow bureaucratic procedures and the nature of EU decision-making procedures in circumstances where sequential programming central and regional level in particular are not quite clear. Thus, issues of absorptive capacity factors depend heavily on EU institutional structures and national markets. To reflect the main deficiencies encountered by beneficiaries of grant projects allocated within the Sectoral Operational Programme it was monitored the implementation of a number of 70 projects under various types of organizations, public institutions of education and higher education, companies as Ltd and Plc, as well as NGOs.

In this approach were performed interviews with project managers and legal representatives of the organizations. The interviews were aimed at highlighting the difficulties they faced in specific stages of project management method. For these specific steps were identified the main weaknesses: identification and project submission, project implementation and their evaluation stage.

Regarding the identification and submission Phase of a POSDRU project, beneficiaries consider this step as a cumbersome and a difficult one. Aspects specified by beneficiaries behind this assertion are held by many changes of the Guide for Applicants - General and Specific Conditions based on the Corrigendum modifying the initial conditions and triggering a restructuring and in some cases abandonment of the project idea. Most common changes in a request for proposals are usually on issues such as delaying the deadline for submission of applications, changing the types of indicators, of eligibility of activities, and even the applicant's eligibility. The best example is the request for proposals for projects 89 and 88, in 2009, when submitting projects were brought forward by extending according to Corrigendum 6 and the project application no. 109 in 2010, when in a press release dated 25.09.2010 (Friday) at 16:00 the call announced the closure on 27.09.2010. All these changes lead to de-motivation potential beneficiaries and low absorption of these grants, denoting a poorly coordinating management of the institutions.

Another negative aspect mentioned by beneficiaries for the accessing process is the evaluation of applications, namely the lack of transparency in AMPOSDRU, and the lengthy process of evaluation of projects, sometimes for over a year until the contract date deposit. A very eloquent situation regarding the lack of transparency in project proposals assessment is the sending of the assessment documents a year and a half after the start of the project with specific modifications of project activities thus jeopardizing the project. Communication with beneficiaries and respect of the principle of transparency in managing and use of public funds imposed by the European Union is violated from the beginning of the process of allocating until the final beneficiaries.

If accessing and contracting these grant projects through the Structural Instruments is a cumbersome process that denotes lack of experience of the staff involved in their programming and evaluation of project applications, which is a percentage of about 20% of the method of Project Management implementation, then the phase of implementing and reporting / evaluation of these projects cannot be a better one. The implementation of projects financed by the Structural Instruments requires rigorous and thorough enforcement of legislation. Thus these types of projects are

subject to national legislation and especially the legislation imposed by the EU in this area. One of the impediments in the implementation of such projects is the lack of legislative reform and regulatory changes especially in the financial and procurement area. An example of legislative amendments in the financial area is considered to be the Order of Eligible Expenditures related to the Sectoral Operational Programme Human Resources Development that was modified in the process of project implementation the last version was published in August 2010. Under this Order, each beneficiary of grant project funded through this program was forced to revise and re-plan the project budget. The emergence of new instructions through the projects with different requirements and new regulations do nothing to hinder the implementation of projects and adverse effects. The most obvious and recent example is the changing of format of HR Activity Report through Instruction 62, which originally required the restoration of retroactive human resources activity reports, i.e. forcing the beneficiaries of projects to substituted documents, but due to the reactions of the beneficiaries, this instruction has been revised. Retroactivity principle of law, especially the administrative nature of the documents, that is the instructions in this programme, is violated by the Management Authority that has issued an Instruction that applies retroactively. This instruction was applied by the Management Authority and caused significant ineligible costs for the final beneficiaries of projects financed by POSDRU. Therefore, the main problem faced by beneficiaries in this stage is not failing of project activities, but coping with the changes imposed by the Management Authority and to predict the occurrence of possible administrative regulations of the program due to national legislation instability.

Excessive bureaucracy imposed by the Management Authorities, constantly issuing of administrative normative documents with administrative character, determines the beneficiaries to depart from the actual implementation of their project objectives and focus especially on the administrative side of it, in order to recover costs for carrying forward the project.

Another barrier in the implementation of projects financed by POSDRU is to ensure financial liquidity to implement projects due to delays in the payment of pre-financing and reimbursement requests on projects. Thus for some projects, beneficiaries had to wait up to 6 months to start the pre-financing payment for project activities and in some cases a period of one year until the transfer of the amount of the refund request, although the contract stipulates funding for a period of up to 45 days. These delays in the payment of pre-financing and reimbursement requests lead to the dissolution of the financing contract due to the inability of beneficiaries to advance the amounts of money for the activities covered in the applications. The dissolution of contracts of funding has an effect on the absorption of structural funds.

In many cases the beneficiaries of these projects, as due to delays in payment of claims for reimbursement, reached to the case of them being unable to conduct project activities and even basic activities of beneficiaries due to lack of liquidity and the allotment of own revenues in POSRDRU project implementation without it being recovered in due time estimated by the beneficiaries. Based on an analysis of annual accounts of the beneficiaries monitored, it could be seen that these balances for 2010, 2011 and 2012 were in the red, the main reason being that of leading amounts in implementation of POSDRU projects, and their impossibility of being taken back from the Management Authority. Some beneficiaries of these projects went for bank loans for the implementation of POSDRU projects, to which are

charged and paid interest, at the very best, many beneficiaries being in the impossibility of paying the financial loan payment. Small size beneficiaries are in even in bankruptcy.

The evaluation - reporting phase of projects at the level of beneficiaries and their transmission to the bodies facilitated to assess, represents a difficult step due to their failure in assessment. Whatever the type of beneficiary and the type of reporting, either final or intermediary, this process is one of the poorest and most problematic. The main failure of this stage encountered by final beneficiaries is the volume of documents submitted and the changes imposed by the standard document Management Authority.

Therefore, the problems identified at the level of beneficiaries are mainly caused by the Managing Authority of the program. These problems are mainly caused by lack of experience in implementing these programmes and the inability of forecasting and planning of programmes according to the method of project management.

Even the EU, after an audit, identified many legal issues improperly implemented and many unapplied principles applicable to these grants resulted in blocking these programme regarding payments by the European Commission to Romania for 6 months in 2012.

The main problems identified by the EU representatives in implementation Reports, Priority Action Plan and the Report of the Audit Commission were mainly regarding delays in the launch stages required for proposals and terms of submitting too short, lack of transparency in formulating guidelines and guides applicant unclear, too much time in evaluation, submission and evaluation of reimbursement claims, deficiencies in respect to specific enforcement of the law, as well as projects control and monitoring. The most important and most significant part is, I think, that caused the previous problems and observed by the staff of the EU Commission is the staff training in these bodies and its deficiency in this structure.

Problems identified among beneficiaries of POSDRU projects by their monitoring in these projects are the exact identified issues by representatives of the European Union.

Previous deficiencies are largely caused by the institutional system also. Constant changes in the institutional system due to constant changes of these leaders have caused imbalances and slowing the implementation of POSDRU. Adopting a model of institutional organization practiced by countries with experience in implementing this type of program was necessary.

The implementation of POSDRU projects created the need for organizational structures to change the beneficiaries in order to achieve an efficient and effective implementation. The beneficiaries of significant size were established specific departments to manage and monitor the implementation of these projects and reducing the risk of irregularities, while providing support to project managers regarding their main difficulties that had to face in implementing these projects.

The lack of experience in Projects Management in Romania in institutions is a weak negative effect. This lack of experience and knowledge of project management principles can be seen on the staff involved in the coordination, implementation and monitoring of grant financing instruments.

Poor planning of the Structural Funds has negative effects, continuous re-planning and continuous changes lead to an inefficient control. Most of the problems identified in accessing, monitoring, control and reporting related to project planning. Legislative and political changes in the country have negative effects, political

changes and replacing leaders of the Management Authorities, Intermediate bodies, and lead to changes in the implementation of projects that are not good for the beneficiaries of such projects among them creating the confusion..

### **In conclusion**

In order to improve project implementation as the main beneficiaries may be adopted and whose effects are immediate and consist of monitoring visits on the spot and making recommendations based on achieving a correlation between all project specific documents.

To avoid irregularities in the following requests for proposals and consider their implementation efficiency necessary for the Management Authority of the programme, to make training sessions for project managers within the beneficiary institutions. Providing beneficiaries with information packages and information on final instructions applicable to this program is the essential condition.

An effective measure to streamline the process of evaluating applications for reimbursement and the creation of a more effective control of ongoing projects is the assignation of a monitor and evaluator for a project from its inception to its end. The number of projects a person can achieve to be made according to that person's competences, skills and ability. Implementation of this measure found to be absolutely necessary because it would avoid the existing times now due to constant changes in reimbursement claims assessors for a single project. The advantages of this measure are that the project is much better known by the monitors, the answers given by these beneficiaries are more grounded and clear, there is a better correlation between the indicators and results achieved target group expenses. By adopting this measure, I consider that the time of evaluation of requests for reimbursement and their payments would be significantly reduced thus removing major failures by the lack of liquidity for the project to the beneficiaries.

Failures shown represent the most significant aspects which decrease the level absorption. In addition to these disturbances there are external factors affecting the implementation of these programs and attracting grants from the European Union under the Operational Programme Human Resources Development.

Therefore, Romania's inability to adapt to EU requirements, the proper organization of a project grants implementation, especially regarding the Human Resources Development Operational Programme, by establishing clear, simple rules, and in line with the EU's, lead to the de-motivation of beneficiaries to access such projects, in some cases even lead to bankruptcy of beneficiaries of such projects.

A correlation of the legal system, its strict application and specialization of human resources within the Management Authority of POSDRU, is a strict and essential condition to use the opportunity of economic development of our country by financial support allocated by the European Union.

The need for an appropriate project management is revealed from all the issues raised in view of the economic and social development of the opportunities offered by the European Union.

Identification of examples of good practice in accessing and implementing Structural Instruments from other European Union countries is an opportunity to increase the absorption of Structural Instruments.

The effectiveness and efficiency of this programme can be captured only by the making of a study on the correlation between the effects post-implementation and the implementation of this program at the macroeconomic level.

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# VIEWS OF ROMANIAN ECONOMISTS ON THE CYCLICAL FLUCTUATIONS IN ECONOMY

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**Abstract:** *As part of a larger work, the objective of this article is to identify the Romanian economists concerned with the study of economic crisis and cyclical fluctuations and to critically and theoretically review the Romanian literature on this subject. The research is a qualitative one and it is based upon the studying of the specialized intern literature, the tools for this research were analysis and synthesis. The study of the Romanian economic thought, concerned with explaining the causes of cyclical fluctuations, has a special importance in understanding the economic system, in general, and in taking the right measures in mitigating the fluctuations and in economic recovery after a crisis period, in particular. The starting point of the theories regarding the cyclical fluctuations in Romania is 1929, when the economic crisis broke out, with serious effects on the development of Romania. An extensive literature has been written on the economic crisis of 1929-1933, in which Romanian economists exposed their views on the causes that generated it and the solutions to get out of that state. The same thing happened during the crisis in 2008-2010. When its effects were felt in Romania, the national economists tried to explain the causes of economic crisis, as well as finding ways of recovery for the Romanian economy. The research reveals the fact that all the analyzed theories, regardless of the historical period, considered the causes of cyclical fluctuation, in general, and the causes of economic crises, in particular, as being endogenous. (technical progress, investment, consumption, production variation, overcapitalization) The presentation of the economists who were concerned by this research is not exhaustive but selective and the most representative were elected to the matter under discussion, based upon the impact of their research on the economic fluctuation theories. It is necessary to take into account the nature of the economic and social era of the historical period in which they were made, and the historical moment not only puts its mark on the theoretical generalizations but also determines their limits.*

**Keywords:** *cyclical fluctuations, economic theories, crisis, Romanian economists*

**JEL classification:** *E32*

## **1. Introduction**

The theories of Romanian economists on cyclical fluctuations and economic crises emerged in the period 1929-1933 when the great economic recession broke out, with serious effects on the Romanian economy.

The views on this crisis were divided: Paul Horia Suciuc argued that it was a crisis of the liberal capitalist system, Mihail Manoilescu saw it as a transformation crisis of the whole system of production and exchange of humankind, Victor Slăvescu and D.

Rottman considered it a repercussion crisis with monetary reflexes and the Marxist theorists argued that it was a crisis of overproduction caused by the fundamental contradiction of the capitalism and was underpinned by a global crisis. (Tudosia, 1992: 225)

Romania faced an agrarian problem during that period, and a long agrarian crisis afterwards, which was international in nature, and the industrial cyclical crisis had dramatic impact on agriculture.

The explanation of the origin and nature of Romanian economic thought regarding economic crisis and cyclical fluctuation in the economy and their impact on the Romanian economy have a major importance in understanding the economic system and in taking the adequate measures to mitigate the fluctuation.

This paper represents a qualitative analysis of the theories regarding crisis and cyclical fluctuation in economy, which is based on the study of specialized intern literature, analysis and synthesis. The grouping of the selected economists was made after the impact which their work had on the economic fluctuations theories.

Among the Romanian economists who were concerned with the study of the economic crises and cyclical fluctuations in the economy we mention: Virgil Madgearu Gheorghe Badrus, Costin Murgescu, Tudorel Postolache, Emilian Dobrescu, Silviu Cerna, Liviu Voinea and Alex Berca. The presentation of the theories of the economists mentioned above will be made in the following.

## 2. Romanian Economists Concerned With the Study of Economic Crises and Cyclical Fluctuations in the Economy

The Romanian economist who best understood the crisis of 1929-1933 and sought out exit solutions not only nationally, where opportunities were limited, but also internationally, was *Virgil Madgearu*. He considered that the economic solidarity of agrarian countries and the reopening of the market of major industrial countries for agricultural products in Central and South Eastern Europe were the solution to exit from the economic crisis.

This meant giving up the most favored nation clause and the adoption of preferential tariffs, which satisfied the interests of Romania and all agrarian countries, but not of the American and West European circles. (Tudosia, 1992: 225)

Other proposed solutions to exit from the crisis were: the transition to the management of the economy by the state, the conversion of agricultural debts, lowering and expanding credits and contracting external loans.

Some of them have been put into practice, but the exit from the crisis has been difficult because the developed countries have transferred some of their difficulties to some less developed national economies, including Romania.

The economist *Tudorel Postolache* exhibited in several works his considerations on the theory of secular cycles ("*Ciclurile lungi și perspectivele economiei mondiale în viitorul sfert de secol*" (1971) and "*Ciclul secular și etapele capitalismului*" (1973)), namely that "the material basis of the secular cycle consists of the scientific research and technological innovation cycle in organic connection with the cycle of structural changes of the economy" (Postolache, 1981: 137)

He uses this theory to better understand the economic crises and developments in the economy of capitalist countries (which are cyclical, in long phases of 20-25 years, with alternating ascending and descending phases) and the world economy and announces "the influences of the secular cycle's phases and stage development on

the decennial cycle's development and phases in the capitalist economy and hypothesizes the existence of a secular cycle under socialism."(Postolache, 1981: 187-193)

Another economist interested in cyclical fluctuations was *George Badrus*, who believed that " the investment cycle should be reviewed and adjusted to the scientific and technical progress, taking into account the cumulative effects of this couple of cycles on the general cycle" (Badrus, 1988:189 ) and the essence of the revolutionary technological processes consisted in creating 'artificial intelligence'. This meant the crisis of the industry and industrialism, as a specific system of productive forces, as well as of the capitalist socio-political system, where it reached its height, and the start of a new great cycle in the history of humankind progress. (Vela, 1986: 144-146)

The slowdown in accumulation, economic growth and increased productivity in developed capitalist countries in the 70s and 80s, is due, in Badrus' opinion, to the "structural crises such as raw materials, energy and environmental shortages. The common denominator of these structural crises is that they have led to a huge mass of relatively additional capital in the form of accelerated obsolescence of production equipment and therefore to a lost capital. This mass of relatively more capital, appeared for the first time in the history, and created rare brakes and barriers to the historical process of capital accumulation, to which the capitalist process of reproduction cannot resist even in the descending phases of the industrial cycle." (Badrus, 1988: 143-144)

The economist believes that the various structural crises strongly influence the development of economic processes in different countries, but the main sources of the newly arisen phenomena in the cyclical course of reproduction are likely endogenous. "Although reproduction suffers the same repetitive phases (production, circulation, distribution, consumption), experiencing periods of expansion and contraction, yet the overall result is the increase in the society, wealth, the emergence of changes in the economic structures from one cycle to another." (Badrus, 1988: 171)

Given the increased interdependence of national economies and the fact that the global economic crisis, characterized by a high complexity, affected in one way or another all countries, one can advance the hypothesis that there is a more pronounced gradual inclusion of all national economies into a global cyclical fluctuation.

The economist *Costin Murgescu* believes that the economic crisis is an "expression of the historical development state of humankind and foremost of numerous and powerful contradictions that are interwoven into the global economy as a whole" (Murgescu, 1986: 45)

The global economic crisis encompasses a series of global crises (of the productive apparatus, energy, raw materials, food, monetary and financial, of the trading system, international technology transfer arrangements, environmental) strongly independent and affecting the fundamental cells of the global economy, widening the gap between them, hindering the economic flows and the mechanisms of international cooperation. (Badrus, 1988: 150)

Emilian Dobrescu is known mainly for developing the macromodel of Romanian economy and also for analyzing the economic cycles since the socialist period, considering that they "are not always negative phenomena imposed by the spontaneous course of the economy" (Dobrescu and Postolache, 1990).

He based the idea that not only capitalist economies but also the economies of the socialist countries know various forms of cyclicity in their development, linking this cyclicity to economic equilibrium forms. (Badrus, 1988:149) Thus, he gave new dimensions to his ideas by creating a typology of business cycles, a characterization of the optimal macrocycle and a mathematical formalization of its components in terms of existing correlations between the economic mechanism and the socialist reproduction.

A first approach addresses the dynamic equilibrium of the economy. This is based on the fact that, irrespective of the production function at a time, its performance will be affected by the restriction of certain factors (such as active population, physical capital, available technologies, raw materials, and so on). To accelerate economic growth, such a restriction can be overcome by inflows from outside the system (immigration, foreign loans etc.) by the overexploitation of production capacity, labor force and natural resources, and all these methods involve offsetting future expenses. Consequently, the amplification and limitation of restrictions generate effects that trigger a certain oscillation of the rate and level of production.

Each of the above categories is manifested in several ways, sudden onset or gradual development. As a function of this behavior we may identify: the moderate cycle (both effects are obtained gradually) the abrupt cycle (both effects occur suddenly) and the combined cycle (effects evolve differently). Because they occur in a development context, they were considered dynamic economic equilibrium cycles.

The second approach refers to "long cycles" (such as the Kondratiev cycles). Based on the research of technological, investment, social and demographic components, he identified three possible types of macrocycles: inertial macrocycle, sequentially controlled macrocycle and optimal macrocycle. The economic macrocycle is the long-term cycle of the society's productive apparatus. The indicators of the economic macrocycle are summary indicators of the national economy, in particular, the final product and the main destinations of its use, the employment level. Several explanations have been advanced regarding the long-term fluctuations: technological innovation, the entry into service of new resources, changes in agricultural production and wars, the thesis about the crucial role of technical progress cycles gaining ground. (Dobrescu, 1987: 186) The conditions to achieve the optimal macrocycle are numerous, considering the overall state of society. This implies the existence of an advanced economy with a strong field of scientific research and technological development. Through the existence of this sector, the country is able to ensure the training and the restructuring on new bases of its productive apparatus in the ascending phase of the macrocycle. In the absence of this sector and under conditions of excessive dependence on imported technologies, the macrocycle cannot be controlled or optimized.

Another condition is to establish social control over reproduction, so as to ensure real social and institutional conditions for the unitary coordination of the economic and social life, which are indispensable to the optimal macrocycle. A superior training for all members of society as well as a high degree of social homogeneity of the population are also required, in the direction of considerable closer working and living conditions. This creates the prerequisites for the understanding by the broad mass of people of the imperatives of long-term economic development and harmonization of interests of different social groups in order to shape the society's overall options based on a broad social consensus. (Dobrescu, 1987: 199-200)

The relative simultaneity of interdependent cycles produces in the economic development process an overall restructuring phase of the productive apparatus. Regardless of the manner in which it is produced (spontaneously or planned), such a phase is inevitable. The feature of this phase is the qualitative change of fixed means and informational background incorporating the results of technological innovation, while the scale and pace of restructuring process depend on the gross accumulation rate. (Dobrescu, 1987: 197)

The monetarist theories, which claim that at the origin of economic fluctuations there is the changing mass of money in circulation, were contradicted by the appearance of the theory of "neutrality of money". Economists, including *Silviu Cerna*, believe that the real sizes are not influenced by the general price level and thus changes in the monetary mass affect only the nominal indicators and not the long term real indicators. (Cismaș, Pitorac and Neamțu, 2012)

The neutrality of money is explained by the way in which the economic agents form their expectations: 'money is not neutral by nature, but is "neutralized" by the fact that, in their current decisions, businesses are considering the future.' Cerna, 2009: 678) Also, a distinction must be made between adaptive expectations, where money is neutral in the long term and rational expectations, where money is neutral in the short term. But all these can be influenced by the type of monetary policy adopted by the government. A discretionary policy can cause increased inflation and thus the expectations of the economic agents are no longer achieved and the currency gains an active character. (Cerna, 2009: 679-681)

The economist *Liviu Voinea*, in his book "Sfârșitul economiei iluziei" considered the crisis of 2008-2010 in Romania to be internal, it would have occurred even in the absence of the financial crisis that started in the U.S., and the external economic crisis was only the triggering factor of the internal economic crisis. (Voinea, 2009:36) The causes of this crisis are: (1) deregulation of markets, (2) the phenomenon of corruption associated with the mismanagement of funds, (3) the speculative bubble in the real estate market, (4) wages above productivity, which led to (5) increased consumption, which has become the main engine of economic growth and (6) private debt financing of exponential growth of the current account deficit, which exposed Romania to the volatility of international capital flows. (Voinea, 2009)

More recently, some economists, including *Alex Berca*, consider that the main causes of the crises can be found in (Berca, 2011:102-103): (1) undue inflation of some companies' stocks (as was the case with "dot.com" companies, which meant the loss of billions of dollars by private investors or financial institutions that had invested money in the stocks of such companies, (2) enormous financial fraud of the order of hundreds of billions of dollars, (3) onerous business of some banks or insurance companies that rose to the level of real fabulous amounts of the order of hundreds of billions of dollars and (4) detection of antisocial acts with a direct result on the sharp fall in the stock exchange, and many other financial aspects.

Another important cause of economic crises is overcapitalization, being more real than overproduction. The issue of overcapitalization is questionable, especially under conditions specific to an advanced capitalist economy and modern production. And the main factors that influence the development of the overcapitalization process would be (Berca, 2011:68): the financial industry in general and banking in particular, credit and insurance institutions, which in the contemporary capitalist economy become much more "dangerous" in triggering an economic crisis than the

manufacturing sector, which creates an abundance (overproduction) of products for the market.

The most cogent example is provided by the crisis of 2007-2010 caused by the lack of regulations, disregard or even breach of the regulations in the financial system, especially in the credit sector and which have come to have global effects. In addition, there is another factor – a non-economic factor, but with an important role in the onset and evolution of an economic crisis. "It is the human factor, human psychology, before, during and after an economic crisis. Panic caused by the risk of a crisis outbreak affects the large and small investors, the manufacturing entrepreneurs and those in the retail sector, who must substantially change their business." (Berca, 2011:68)

## **Conclusions**

This research was intended to carry out a comparative critical review of the Romanian economic theories on economic crises and cyclical fluctuations.

The main results obtained were:

- the identification of the main Romanian economists who were concerned on studying economic crisis and cyclical fluctuation in economy: Virgil Madgearu, Gheorghe Badrus, Costin Murgescu, Tudorel Postolache, Emilian Dobrescu, Silviu Cerna, Liviu Voinea and Alex Berca;
- the presentation of the Romanian economic theories that address the issue of economic crises and cyclical fluctuations in economy from which resulted that all these theories considered that cyclical fluctuations are caused by endogenous factors. Some of them, like Tudorel Postolache, Gheorghe Badrus, Costin Murgescu and Emilian Dobrescu, believe that technical progress and innovation are the main reason of cyclicity, others, Liviu Voinea and Alex Berca, considered market deregulation, corruption and overcapitalization being the causes of economic crisis, analyzing mostly the crisis from 2008-2010.

In conclusion, it can be said that a series of factors contributed to the onset and development of the economic crisis in Romania (technical progress, investment, production variation, corruption, overcapitalization), but the structural problems of Romanian economy determined the external factors to act decisively.

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## A VIEW UPON THE HISTORY OF THE PEASANT ASSOCIATION

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**Abstract:** *The whole social and economic life is based on some form of association. People live in societies, so the idea association appeared in the most natural way, at first in an unconscious form, moving later towards the conscious and organized association. Seeing that through the association they were able to defend their professional interests, fulfil their economic goals and meet their common needs, peasants adopted its formula with confidence. The ways in which the association spread were diverse. Depending on the economic, social and moral circumstances and on the habits and goals of the various masses of peasants, there have been developed mainly one of the three forms: trade unions, cooperatives, and mutuality. The peasant associations helped the rural communities everywhere and were the object of interest of many theoreticians, who sought their roots, their forms, presented their principles and analyzed their results. One of them was Professor Nicolae Ghiulea, a Romanian economist and sociologist, fervent supporter of the association idea.*

*Nicolae Ghiulea was among the most important representatives of the cooperative doctrine of the interwar period and was well-known for his prestigious academic career. He filled several administrative and social leading functions and had a rich publishing activity in the areas of statistical theory, social economy, cooperatives and sociology. This article sets out to present his view upon the history of the peasant association, as exposed in one of his books entitled „The peasant associations”. The author focuses on the various forms of peasant associations, their history and their practical results in interwar Romania, explaining why they were beneficial. At a closer look, peasant associations are still a viable solution to many current social issues, especially those concerning agriculture.*

**Keywords:** *peasant association; agrarian reform; cooperative; Nicolae Ghiulea*

**JEL classification:** *B31, J54, N54, O13, P13, P32, Q13, Q15*

### 1. Introduction

Born in Iași (11 September 1884), with an original background in Mathematics, Nicolae Ghiulea was a professor of social policy at the Faculty of Law of the University of Cluj (from 1919 until 1942, when he retired). His inclination towards Sociology came from a series of special sociological studies conducted in Paris, Göttingen, and Iași. He was an economist and a sociologist, filled outstanding administrative and social leading functions, and was one of the most important representatives of the cooperative doctrine in the interwar period. Ghiulea was one of the initiators of the social market economy in Romania and was known for his prestigious academic career and rich publishing activity in the areas of statistical theory, social economy, cooperatives and sociology.

The socio-economic issues in general and current problems of the interwar period

in particular were the main concern of Professor Ghiulea. As a fervent supporter of the idea of association, he found the solution to the shortcomings of the agrarian reform in Romania in the organization of peasant associations. This article sets out to present the various forms of peasant associations, their history and their practical results in interwar Romania, as Nicolae Ghiulea described them in his paper published in 1926, called *The peasant associations* (original title: „Asociațiile țărănești”).

Since ancient times, the man has been able to live and prosper by working the land. If early mankind allowed free access to natural wealth, with increasing population and scarcity of resources, property developed, and work began to be organized. The basic principle of economics, that of seeking maximum satisfaction with a minimum consumption of resources, caused the man to organize his work so that it would allow him to unfold activities for relaxation and personal development as well. In this respect, he followed three ways: invention, division of labour and association. Discoveries of any kind make human labour easier and more productive, division of labour maintains favourable economic and social relations between the individuals of a society, and the association increases people's strength to work and struggle, enabling them to develop and civilize.

In the period between the two world wars, a good organization of the agricultural work in order to improve the agricultural production and to resolve the land issue was imperative. For this, several aspects had to be taken into account. In terms of nature, the organization of agricultural work related to the scientific culture of the soil. Concerning capital, a good organization of labour in agriculture needed the procurement of working capital, farm machinery and buildings, from peasant savings or obtained loans. Finally, in terms of work, there were necessary the technical and commercial business organization in order to bring as much profit as possible, the insurance of labour against natural hazards, the division of labour and the concentration of production in large enterprises

## **2. The Consequences of the 1921 Agrarian Reform**

The agrarian reform of 1921 contributed to changing the course of development of the Romanian economy in general, and the agriculture in particular, as a result of modifying the structure of land ownership.

Another consequence was the fact that it accelerated the transfer from grain stage (wheat monoculture on large areas) to the alternative system based on crops with a higher return.

Due to its wide scope, the agrarian reform of 1921 was appraised as the greatest and most economically daring of the world. It was an act of social justice, accepted by the entire Romanian society.

Beyond its social character, almost universally recognized, the land reform was, however, criticized at economic level. The main objections (at that time) were related to de-industrialization of agriculture. The fact that small farms would not afford mechanized tools enabling higher yields and productivity.

Nicolae Ghiulea argued that the agrarian reform of 1921 was made without a thorough study, without serious training, without a well thought program. The problem was not achieving this reform, which was in fact urgently needed, but the inappropriate way in which it was applied and the improper means which were used. The negative consequences that followed referred to a lower production in quality

and quantity, then reduced exports and, finally, a worsening of the economic balance and of the exchange rate. There had been made a transition to the small-sized property, in which peasants worked their small plots of land they received with their own arms, but with primitive techniques. The unprepared disappearance of the large property thus contributed to decreased earnings from the agricultural production, a rise in the price of life and the collapse of the Romanian currency. All this caused the Romanian economy to enter a crisis.

The peasants suffered greatly. They encountered great production difficulties, due to the lack of tools, livestock, capital, and the lack of agricultural insurance organization that did not allow them to perform the agricultural work safely. In addition to this, they were obtaining very small gains, because of the high production costs and the low sales prices. The existence of a genuine agrarian crisis, of a total disorganization of the agrarian life could not be denied, therefore. The peasants were in an even lower economic situation than the one before receiving land ownership.

However, morally, the agrarian reform had beneficial effects. Peasants began to aspire to a better life; they had their appetite opened for culture and for participating in state leadership, which was an important incentive to work and progress.

With all the difficulties brought by the land appropriation, the action came on time and was extremely valuable. The superiority of the small-sized property regime over the great agrarian properties was recognized worldwide. The small landowner constituted an element of order and social equilibrium. Besides, the peasant landowners had the ability to culturally enhance the Romanian people. In order to spread and develop culture, general welfare was necessary. The regime of the great agrarian property provided a low level of civilization, since the majority of the population, who was employed in agriculture and lacked land, was living in misery. The small-sized property regime could be superior to the one of the great agrarian property even economically, provided that the agricultural labour was organized.

It was necessary to ensure a professional and economic education of the peasantry, removing restrictions on production and sales, and granting peasants full freedom to organize and defend. Hence, production was going to increase, exports also, and the situation of trade and currency was going to improve. Increased earnings would have determined the peasants to increase consumption, and the industrial and commercial activity would have thus intensified. This general welfare was going to lead to the state's welfare, to recovery and development. Moreover, with the introduction of the universal suffrage, Romania had a clear path to get among the strong and healthy democracies of thriving culture and civilization.

Nicolae Ghiulea believed that the association was the key to the organization of agricultural labour under small property, defining it as a means by which the man achieves, with others, that which he cannot achieve by himself. By association, the man increases his strengths and his action field, saves his forces and riches, increases his activity and its outcome, and reduces his damages resulting from disasters, dividing them among all. Ghiulea considered that the association was the most appropriate means for the organization of work in the form of small agricultural properties, as it also provides the harmony between the different social strata.

### 3. Forms of Peasant Associations

Less used in agriculture, the association in its perfected form was not introduced until later in the rural areas. The slow spread of the peasant association is explained by the peasant's economic individualism, the lack of importance and the rarity of the rural agglomerations, the isolated peasant life, and, last but not least, the lack of social education resulting in the distrust of fellowship.

In carrying the Romanian peasant life, since old times, there have been many expressions of a strong social sense, of mutual aid. History offers many models of associations formed in order to work together, or in order to commonly achieve economic or social benefits. Instinctively, the peasants associate and are open to the idea. However, explained Professor Ghiulea, the introduction of the organized and legal associations with high goals and of general interest was not easy to achieve without prior education in this respect.

The purposes of the peasant associations are diverse and can be divided into three categories: professional (for defending the interests of the small farmers), of cooperation (from the desire for a gain), or mutual (for satisfying common needs). The first group includes farmers' trade unions, organized in order to promote agriculture, ensure vocational education and take general measures of local interest.

In the second group we have the many types of cooperatives: of joint purchase (they are the most valuable and most easily to organize for farmers; through them villagers remove the intermediaries, buying directly from the manufacturer), credit cooperatives (offer cheap and fast credit), of agricultural production (one of the brightest, most common and most successful forms of production cooperative; through it, the small landowner can benefit from the advantages of the great property; the economic concentration decreases the production cost; the selling price increases), of storage or joint selling (useful for individual farmers, being sometimes imposed by the large buyers who refuse to make transactions with small individual producers), to industrialize and exploit animal and agricultural products (cooperative factories for oil, wine, textiles, dairy-cooperatives, cooperatives for egg trade, for wool trade etc.), consumption cooperatives (which, in addition to food and necessary goods, acquires housing to the peasant).

Nicolae Ghiulea believed that by organizing agricultural labour into production, exchange and consumption cooperatives, there could be obtained all the advantages of large enterprises, namely the capitalist organization, the division of labour and the concentration of production. Thus, the peasant would become the only master of his labour and the results of his work. The intermediaries and the speculators, in the person of usurers, merchants, great industrialists, owners or lessees would be removed and the peasant would find his freedom and his economic power.

Finally, the last category of peasant associations refers to mutual insurance associations, which cover all agricultural risks and allow peasants to share damages with their fellow associates. In this case, federalization and centralization of various local associations was considered of utmost importance, because agricultural risks often affect a whole region not only a common, requiring the organization of the reinsurance operation.

#### **4. The History of Peasant Associations**

Professor Ghiulea sought the roots of the peasant association in the works of the two associationist philosophers, Charles Fourier (France) and Robert Owen (England). Contemporaneous, these two cooperative promoters believed that the association was the ultimate solution to the social problem related to the injustice in the distribution of goods. Robert Owen contributed to the birth of the consumer cooperative, as an act of the urban cooperative movement. His ideas stood as an example for the Rochdale pioneers, the founders of the modern cooperative. On the other hand, from the ideas conceived by Charles Fourier, the industrial production cooperative was born, also as an act of the urban cooperative movement.

These two socialists deserved to be mentioned here because both based their plan of world reformation primarily on agricultural associations. Fourier imagined those economic and social associations called „phalanxes”, which actually stand for the complete consumer cooperative. These phalanxes were also complete production cooperatives, because they were intended to produce everything necessary for living in the association. They were therefore integral cooperatives, based on agricultural work and production, as associate members were primarily farmers, and sporadically craftsmen and industrialists. However, because the phalanxes expected a certain level of culture, they were inaccessible to farmers and their influence upon the agricultural associations was null, being manifested only within the worker agglomerations. Nicolae Ghiulea believed that although phalanxes could not be counted as parables for the creation and development of the agricultural association, they bred the idea of association under all its forms, as they gave rise to the idea of the modern cooperative that Fourier did not think about and which he would have never admitted in his system.

Robert Owen was also a utopian idealist, but unlike Fourier who had a modest financial situation, he had the financial ability to put into practice his plans for social transformation. He started his social activity through a number of patronal measures to improve the situation of the workers at his factory in New Lanark. Then, wanting to expand his ideas, he turned to the English government and to the governments of other countries, contributing thus to the development of laws for the protection of workers. Trying to spread ideas among the other industrialists failed, because of the greed that characterized them.

Observing the misery of workers everywhere determined him to develop a system of social organization in which all the sufferings and all the evil were removed. Thus the idea of agricultural peasant associations called „communities” was born. Owen believed that reforming the world could only be achieved by creating a new social environment, and that environment could only be at the countryside, where there were the virtues and the wealth needed for the ideal world he dreamt about. Owen's doctrine, said Ghiulea, was an agrarian doctrine, whose central idea was the association, namely the peasant association as an ideal of social organization.

These communities were founded on communist grounds, everything except the family life evolving jointly: production, distribution, public life. His most important achievement was the New Harmony community in the U.S. state of Indiana. But practice did not comply with theory, and what was meant to be an organized community, turned out to be a society in a profound anarchy.

This experience that had cost Owen and other American philanthropists enormous sums, proved that Owen's system was nothing but a unrealizable utopia. However, the desire for social transformation that Owen had inspired to the whole world caused, in terms of politics, the birth of the international and democratic socialism, in economics terms, the genesis of cooperatism and trade unionism, and morally, it created the mutualism.

The economic and social circumstances in France and England, and more specifically the speed at which the transition from feudalism to capitalism was made, gave rise to the two cooperative movements: the production cooperative, imagined by Charles Fourier and the consumption cooperative, implemented by Robert Owen. In England, the rapid development of the large industry and of mechanization caused the misery of workers, who lost their jobs, the only way to improve their living being their association in consumer cooperatives. In France, on the other hand, the large industry developed more slowly, but it contributed to the progressive decline of craftsmen, who found the solution for survival by organizing production cooperatives. The cooperative movements in England and France became known abroad, and thus the idea of association spread worldwide.

Through its economic side, the cooperative idea won Hermann Schulze and through its Christian side, it captivated Friderich Wilhelm Raiffeisen. The two Germans were the founders of the two famous cooperative models: the urban cooperative (the Schulze-Delitzsch system) and the rural cooperative (the Raiffeisen system). The principles established and imposed by these two systems, along with the one of the „Rochdale Pioneers” – the fathers of the consumer cooperative – can still be found throughout the current cooperative movement.

Hermann Schulze turned his efforts to organize production cooperatives in order to help the craftsmen who were overwhelmed by the large industry, but the biggest success he recorded was with the organization of the urban credit cooperatives. The one who came to answer the needs for rural credit was Friderich Wilhelm Raiffeisen, considered by Nicolae Ghiulea the inventor of the peasant association, the founder of the rural cooperative. When, in the mid nineteenth century, there could only be heard the cry of the industrial workers who were in misery because of proletarianization, Raiffeisen focused on helping the farmers through the establishment of popular banks intended to eliminate the usurers who provoked them suffering. Raiffeisen's movement showed that, for the success of cooperatives in villages, first it was necessary to establish credit cooperatives. This was normal, as long as the farmer could not do the work without capital, and in his absence, without credit. Raiffeisen completed his cooperative model with the organization of the production cooperative. That was the path Romania chose as well.

In Romania, the Saxons were the ones who brought the idea of cooperatives. They started founding, since 1852, credit cooperatives of the Schulze-Delitzsch type, and later, after 1865, they established in Transylvania the credit cooperative following the Raiffeisen system. Romanians' first attempt was made in 1868 and belonged to a teacher named Visarion Roman, who founded, in Rășinari, „The Society for Storage and Loan”. This association operated for only 13 years, because of the lack of interest shown by the peasantry and a poor leadership. Although it did not precede a cooperative movement in its true meaning, the company determined the establishment of numerous popular banks that followed its example. Roman

Visarion continued to set up other associations called credit reunions, which he subsequently attached to „Albina” Bank, the first Romanian bank, whose director was until his death. From the beginning, the „Albina” Bank was regarded as the protector and the mentor of the popular peasant banks in Transylvania, operating 19 credit reunions, branches of the parent bank. The lack of independence of the reunions led to their discontent and to the suppression of the cooperative movement. „Albina” Bank opposed to their desire for freedom, liquidating them one by one, causing the end of the cooperative movement initiated by Visarion Roman. The teacher had thought, absurdly, that a commercial credit enterprise was able to support a cooperative movement and protect the popular banks, based on totally different ethical and economic principles than commercial banks. Without having any connection with „Albina” Bank, the only popular bank who survived in those times was the credit reunion „Aurora” in Năsăud, founded in 1873, which had a very great importance, because it served as a model for the first credit unions established in the old kingdom.

Unlike in other countries, where the cooperative movement started in cities and was then propagated in rural areas, in Romania the cooperative was born in villages and the first cooperatives established were the popular banks. Nicolae Ghiulea explained why in Romania things were different. The cooperative is an economic association that requires a certain level of culture, a deeper understanding of the economic and social statuses. Cities with a higher cultural level are better prepared for the cooperative idea than villages. In addition, the cooperative does not only claim culture in order to be understood and embraced, but it also claims an urgent economic necessity that would find its relief in cooperatives. The mid-nineteenth century and a few decades after, however, found the Romanian cities in a more than acceptable state. The transition from feudalism to a regime of liberty culturally raised the urban, while villages began to decline. In the cities, there was no need for a cooperative movement and P.S. Aurelian’s failure of the cooperative propaganda made in 1870 stood as a proof. Instead, the spread of the cooperative movement in the Romanian villages that were in misery was imperative. The Rural Laws of 1864 and 1866, which granted freedom to peasants, caused them more harm than good, as they ended up being greatly exploited by the landowners. Through their revolts in 1888 and 1891, the peasants did not achieve great benefits, their situation continued to degrade and they became victims of usurers’ speculation from the need for credit to buy food.

The peasantry’s moral and economic misery after 1888 was indescribable. The first ones who noted the need to raise the peasantry economically and morally were the teachers. With immense efforts and dedication, taking the examples of the Transylvanian credit reunions, they started spreading the association ideas in old Romania’s village life. Therefore, in 1891, they founded the first cooperative in Romania. It was the popular bank „Dumitra” in Dara village, Buzău. The cooperatives flourished there, like in Transylvania, in the form of the credit cooperative, as the peasantry’s most pressing need in those days was for credit and removing usurers.

The Romanian experience verified the truth that the cooperative succeeds only where it fulfils a real function and meets well felt necessities. In addition, the cooperative was not founded in a mountainous area by accident. Mountain counties

have always been superior culturally and economically, which is a necessary requirement for a successful cooperative movement. Although it started its activity like the Rochdale pioneers with a very small number of members (34) and a small capital (127 lei), the credit cooperative in Buzău was the initiator of the Romanian cooperative movement. After two years of adjustment with the idea of cooperatives, a priest named Diaconescu founded in Dâmbovița the second popular bank called „The Peasant”. Later, five other cooperatives were born, all in mountain areas. After a brief stagnation, starting with year 1896, the cooperative movement saw a great upswing, being established within 10 years 711 credit cooperatives in rural areas. The cooperative expansion in the years 1899-1902 was due, in part, to the support of Spiru Haret, the Minister of Education, who encouraged teachers to spread the valuable idea.

In 1903, the law on popular village banks and their Central House was promulgated in order to coordinate a movement that exploded impressively. Rather than offer them the freedom of federalization, the law made the mistake of involving the state and imposing centralization. The consequences were an accelerated and artificial development and the alienation of the cooperative movement from its fundamental principles.

Cooperatives were given a number of administrative, fiscal and judicial advantages. The new organization increased the number of cooperatives, and although many of them were born from state order, with the help of the Central House most attempts succeeded, defining a remarkable cooperative movement in Romania. The Central House, always led by skilled people committed to the movement, contributed greatly to the cooperative's progress in all directions. In 1905, the idea of federalization was introduced in the law on popular banks. The Central House deeply imbued with the cooperative spirit, encouraged cooperatives to establish federals, in order to be able to maintain their autonomy and act decentralized.

The success of the popular banks in solving their financial problems urged farmers to focus their attention on their second worry, namely the lack of land, whose solution was also the association, through the establishment of the communities for leasing land. The leasing communities' benefits were on both sides: peasants received land, and the owners received larger rents, also having the assurance that their lands were well cared for and rationally cultivated.

The problems concerning usurers and leaseholders being removed, peasants needed further to eliminate merchants through the organization of the consumer cooperative. The movement started after 1906, but its way was difficult. However, while in 1907 there were 91 consumer cooperatives, in 1923 there were 2690 consumer cooperatives recorded. Slowly, the cooperative was extended to all industries. The fruitful cooperative idea made it possible for peasants to help each other with all the hardships of their economic lives. The production cooperative was the one that came to complete the Romanian cooperative movement. Starting with year 1905, there have been established numerous forms of production cooperatives (bakeries cooperatives, mills cooperatives, dairies cooperatives, purchasing and joint selling cooperatives et.), all signs of a brilliant development of the Romanian cooperative.

## **5. In conclusion**

The results of the peasant associations in Romania were not at all modest. The Romanian cooperative movement started later than in the developed countries, but the cooperative idea was embraced by the Romanian peasants in a remarkable way. In a short period of time, most villages had at least one cooperative association.

The local needs and the various shortcomings led to the organization of mixed cooperatives in post-war Romania. They were called mixed because they were ultimately production cooperatives, but they also acted as joint supply cooperatives (of both materials, machines and tools required in the production process and the items necessary for the daily living), specific to the consumption cooperative association, and joint selling (simple selling plus semi-transformation of products). This was the kind of cooperative that spread in our country, meeting all the interests of the peasantry and taking agricultural unions' place, unknown in the Romanian villages. Their well-written status introduced in Romania the fundamental principles of the pure cooperative.

The pre-war village communities (for land leasing) disappeared after the land appropriation for various reasons, such as the fact that the peasant did not think it would be the appropriation beneficiary but those who led the community, or the poor results of some communities seized by the state. After the war, few communities were created, and their activity was reduced. Ghiulea thought that it was unacceptable the decline of the cooperative movement through communities, which had been so flourishing and represented the Romanian specific of cooperatives. The professor believed in the utility of the communities for the future, when the fragmented lots would not be sufficient for a family living.

Nowadays, the excessive fragmentation of land does not allow the establishment of productive farms, but mostly the achievement of the family economy. The simple peasant, lacking sufficient funds, does not have the technical equipment needed to make a profit from agriculture. That is why any forms of association are still opportune today. Moreover, Romania can benefit from the European Union's support as well, in order to improve agriculture's profitability, so it has a solid ally towards its overall economic development.

## **6. Acknowledgements**

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# THE THEORY OF THE FIRM AND THE EVOLUTIONARY GAMES

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**Abstract:** *The neoclassical theory of the firm deals with the pattern of perfect competition, within which the perfect information available to economic agents provides instant allocation of production factors and access to economic goods. The Austrian School (C. Menger, L. von Mises, Hayek, etc.) supported the idea of minimal state intervention on the markets, bringing important conceptual developments on the theory of the firm. Hirschleifer (1982) put forward the model of social and institutional functioning, arguing that the game theory is able to predict the outcome of the collective behavior and the human characteristics necessary for building the respective institutions. The evolutionary theory provides the firm and the entrepreneur the recognition of the functions of innovation, of generating and exploiting information and of organizing and coordinating production. The evolutionary perspective of the firm assumes the existence of a body of knowledge that is acquired through and builds up the organizational memory, subsequently found in routines, all choices being made based on these routines (Nelson and Winter, 2002). The evolution of the firm is considered to be similar to natural selection, but unlike the classic market selection, the evolutionists suggest the existence of a plurality of selection media. The present research is structured as follows: a brief introduction into the theories of the firm, the second part of the paper analyzes the theories of the firm from an institutional, neo-institutional and evolutionary perspective. In the third part of the paper the evolutionary games are described and analyzed from the evolutionary perspective of the firm. The last part of the paper represents a study of the “hawk-dove” game dynamic replicator. The final conclusions of the paper show that the evolutionary theory brings valuable contributions to the foundation of explanations regarding economic phenomena, indicating new directions for advanced economic research.*

**Keywords:** *theory of the firm, game theory, evolutionary theory, evolutionary games, dynamic replicator.*

**JEL classification:** *D21, D43, L13, C73, C71*

## 1. Generally Introduction

In this chapter we shall identify the main views on the firm expressed by the Neoclassical Economics and the Austrian Economics and we shall present the main theories of the firm. If in the case of a perfectly competitive market the firms are of approximately equal sizes and cannot influence price formation, in the case of imperfect markets the competitive behavior of firms show that they are in active competition with each other and have some power to influence the market. The analysis of market structures is useful in identifying different types of markets, providing information on the performance of firms. The paradigm on structure,

conduct and performance (Chamberlin 1933, Bain 1956) dominated economic thought until the '80s. According to this paradigm, the structure of the market in which firms operate is ultimately the determining factor of performance and is measured through indicators such as profitability. The Neoclassical theory deals with the pattern of perfect competition, within which the perfect information available to economic agents provides instant allocation of production factors and access to economic goods. According to the neoclassical theory, the firm exists to combine production factors to achieve and maximize profit (Coase 2002).

Harvard School (J.S. Bain, E. Mason, etc.) became well-known due to the conceptual research done on the structure and functioning of markets, barriers to entry, competitive strategies, economies of scale, transaction costs and antitrust cases. Contrasting the paradigm on structure, conduct and performance, the Chicago school continued to use an approach based on the neoclassical model of long-term equilibrium in competitive markets. Thus, the resources are allocated optimally and the market is the one that has the power to balance supply and demand. The representatives of this school (A. Director, G. Stigler, W. Baumol, etc.) studied the theory regarding the life cycle of the firm, the firm's power on the market as a determinant of its integration. A significant contribution belongs to W. Baumol (1982) who promoted the theory of contestable markets, assuming that markets become competitive in the long term, and government interventions are not always considered necessary.

The Austrian School (C. Menger, L. von Mises, Hayek, etc.) supported the idea of minimal state intervention on the markets, bringing important conceptual developments on the theory of the firm. We observe such research on the competitive structure of markets, those relating to the dynamic nature of markets, as well as the research on the characteristics of firms, sectors and markets. Starting from the research done by Carl Menger and Eugen von Böhm-Bawerk, Mises Ludwig von Mises (1881-1973) helped develop theories of the firm showing that giving up private ownership of production factors makes price formation and entrepreneurial calculation in monetary terms almost impossible. More recently, researchers that may be considered as followers of neo-Austrian school, such as Kirzner (1913), Reekie (1984) and Littlechild (1986) used the term "evolutionary economics". The theory of evolutionary economics has developed in parallel with the institutional economics. Basically, it is about the endogenous view according to which the beliefs, norms and customs of the society could lead to the formation of institutions that facilitate corporate behavior. Hirschleifer (1982) put forward the model of social and institutional functioning, arguing that the game theory is able to predict the outcome of the collective behavior and the human characteristics necessary for building the respective institutions.

The research called "An Evolutionary Theory of Economic Change" (Nelson and Winter 1982) represents the starting point and a reference for the trend addressing the theories of the firm from an evolutionary perspective (Arena and Lazaric 2003). Nelson and Winter (2002) have criticized the neoclassical theory considering that the profit maximization assumption is not valid in all cases, indicating that excessive attention is not to be allotted to market equilibrium, but rather to dynamic processes arising from economic exchanges exposed to risk and uncertainty. In economics, the concept of evolutionism has resulted in an institutional type of evolutionism. One of the most important authors who advocated for evolutionary type approach was Friedrich A. Hayek, who observed that efficiency is approached from a dynamic point

of view, contrary to the neoclassical theory where the approach was from a static point of view profit maximization.

The evolutionary theory defines the firm as a set of essential skills, gathered based on its learning ability. The evolutionary approach adopts the concept of limited rationality, the individuals and the organizations have much to learn in a complex environment characterized by uncertainty in the context of the knowledge economy. From this perspective, the firm is regarded as being a coherent system of activities associated with the production of synergistic effects (Gould 2002).

## **2. The institutional and neo-institutional perspective on the theories of the firm**

The Walrasian model (1873) was imposed, economics focused exclusively on production and consumption. Postulating institutions and rational behavior made it possible to develop mathematical models by which the interaction on the free market could be conceptualized. Thorstein Veblen (1899) argued the need for a reorientation of the economic theory from the exclusive concern regarding individual choices towards the study of institution's impact and evolution. John R. Commons (1931) advanced the idea that the economy is defined by institutions and conflicts of interest. The institutional paradigm developed as a reaction to the tendency of economics' specialization on supply and demand issues, ignoring the problem of institutions that enable the functioning of markets (Veblen 2005).

Knight (1921) paved the way for highlighting the role of institutions in reducing uncertainty, and Coase (1937) showed that an institutional framework conducive to economic development is one that reduces uncertainty and transaction costs. The framework developed by R. Coase is the one that reduces transaction costs so that participants in the economic game to take advantage of market opportunities.

The institutional perspective on the theory of the firm is closely related to the issue of transaction costs, of uncertainty, and of innovation (Sherer (1967), Stoneman (1983), Doris (1989) and Reingenum (1989)). Institutions influence behaviors through information on individual action, social overseeing and fostering cooperation (North 2007). The basic idea of institutionalism is that institutions create economic game rules, generates economic incentives, and these incentives influence the behavior of economic agents. The institutional system generates incentives with specific and predictable effects on the behavior of decision-makers, contributing to the efficient allocation of resources and stimulating the flow of innovations.

The hypothesis put forward by O. Williamson were considered and applied: in the history of economics (North 1981), in the game theory and organizational economics (Alchian and Demsetz 1972, Nelson and Winter 1982, Grossman and Hart 1985). Until the '90s, the dominant school of economic thought continued to produce models that excluded the institutions from among the relevant factors. North (1990) considered as a source of transaction costs, the overall costs of maintenance and operation of a property rights system in the conditions of increasing specialization and labor division expansion. These economic theories make up the group of institutional theories on rational choice and set the transition from institutionalism towards neo-institutionalism.

A significant element, approached by the institutional economics is represented by the identification of socially optimal exchange structures to ensure maximize wealth. This requires a functioning market system in which economic agents will select those rules that will allow them profit maximization. Rational individuals compete not only

to maximize benefits under a specific set of rules, but they also try to change these rules and obtain higher earnings (Demsetz 1972).

Neo-institutionalism provides recognition for the contributions of the neoclassical school of economic thought, using both quantitative and experimental methods to solve relevant issues (Diermeier and Krehbiel, 2003). A number of authors (Meyer and Rowan 1991; Williamson, 1991; Kalai and Lehrern 1993, Foss 1994, Langlois 1996, Joskow 2002, Aoki 2005) studied the efficacy issue of alternative mechanisms of governance as well as the role of institutions in generating economic performance by lower transaction costs.

The existence of institutions, whatever form they adopt, is subject to selection processes depending on the environment and mental constructions of individuals. From a set of institutions, the individuals can choose a type of institution that lasts over time. This phenomenon has three explanations: the first is related to the evolutionary theory in biology, where the processes of selection, learning and imitation find their explanation; the second path concerns ideology, the changes occurred in social values which represent a major factor in institutional change; the third explanation concerns the set of rules that individuals have become accustomed to even if they are harmful and can lead to inappropriate behaviors.

Assuming that rationality is limited, it is considered that individuals, even if they have access to new information, operate under pre-existing mental constructions. In this vein there can be perceived a return to the Austrian school (Simon and Hayek), which integrates the two concepts in the analysis: limited rationality and procedural rationality. If the first concept was integrated in a shorter time, for the second it took a while longer. Kalai and Lehrern (1993) get closer to the Austrian approach by introducing the notion of subjective rationality of players. The only condition they admit is that the players' beliefs are updated through learning.

Aoki (2005) introduced in the analysis of institutions the idea that individuals have subjective representations of strategic profiles. The notion of mental models, which Denzau and North (1991) have used to justify the importance of institutions, is consistent with the Austrian view of rationality. The individuals are subject to a set of rules not because they understood them, but to respond effectively to environmental changes. The rules that allow groups that have adopted them to thrive and grow are imitated allowing the guidance of individuals' behavior (Garrouste 2007). These are ways of acting which individuals do not need to understand explicitly, they represent procedural rationality.

Below we present the evolutionary perspective that suggests a long-term analysis of the company's behavior on adapting to the competitive environment of the market, this adjustment being made based on random processes as well as on the identification of new routines.

### **3. The evolutionary perspective of the firm and evolutionary games**

In biology, the concept of evolutionism is closely linked to that of natural selection. The mechanism of evolution is explained by the fact that members of a population differ among themselves by different traits. Among these, only some features represent an advantage, and the individuals that hold them are better adapted to the environment than others. These individuals will survive longer and have more off spring, the traits are passed on through genetic inheritance, helping their survival within that respective population.

D. Bacaicoa and A. Brazales (2004) compared the properties of the human action theory formulated by Ludwig von Mises and Friedrich Hayeck's spontaneous order with the appearance of emerging properties, of self-organization and path dependency in the complexity theory. The evolutionary theory of the firm refers to complex systems, including economic ones, in which there operate independent network composed of multiple agents acting according to internal rules.

The evolutionary theory deals with the innovation activity as irreversible enlargement process regarding the complexity of economic activities. According to evolutionists, knowledge, the skills, the learning have central place in encouraging the innovation process, constituting its core.

Uncertainty is caused by the increasing complexity resulting from continuous changing of the economic and social reality and from an increasing number of variables that have to be considered. Institutions are seen as factors reducing uncertainty, the evolutionary theory recognizing competition, imitation, cooperation and domination as elements of survival in the market. The dynamic character of firms is endogenously generated by innovation in products, processes and organizational forms.

Organizational routines materialize knowledge generated by learning, being generated by repeated interaction between agents and environment. Routines are defined as patterns of interaction which represent efficient solutions for specific problems. Learning is conceived as a collective process that allows each individual to overcome the limited rationality by three factors: the relationship of imitation and emulation among individuals; their joint contribution to the understanding of complex problems and the existence of a common code of communication and of some coordinated procedures to search for solutions (Smith and Szathmáry 1997).

The company's development process is guided by the identification of new routines that are subject to selection at market level. In this configuration, the existence of production resulting from the behavior of firms and market conditions is one that opposes the traditional concept of market structures configuration (Dosi, Teece and Winter 2008).

The evolutionary theory defines the firm as a set of essential skills, gained from its learning ability. The evolutionary approach adopts the concept of limited rationality, individuals and organizations have much to learn in a complex environment characterized by uncertainty in the context of the knowledge economy. From this perspective, the firm is regarded as a coherent system of activities associated with the production of synergistic effects (Gould 2002).

The company's development process is guided by the identification of new routines that are subject to selection at market level. In this configuration, the existence of production resulting from the behavior of firms and market conditions is one that opposes the traditional concept of market structures configuration (Dosi, Teece and Winter 2008). In what follows, starting from the evolutionary perspective, we shall investigate the evolutionary game class of firms using modern and generous sets of instruments offered by the game theory.

The evolutionary games were first used and applied in evolutionary biology (Taylor and Jonker 1978, Maynard-Smith 1982). Since the 60s and 70s there was an increase in interest regarding the application of the game theory in biology, particularly stochastic games, the games of 'n' people with non-zero sum and those in extensive form. Lewontin (1961) has shown that stochastic games can be used in the study of the evolutionary problems of species. Turner and Rapoport (1971) have

discussed the concept of preference in economics and biology. Marchi and Hansell (1973) considered the evolutionary type processes and biological studies on non-cooperative game. Dawkins (1976) and Selten (1978) presented a mathematical analysis of associated strategies for stable and non-cooperative equilibriums. Strategic interaction, identified in biology, regarding obtaining the gain is further developed and applied in the field of economy. Therefore, there were identified solutions to evolutionary economic games such as Nash type equilibrium ones (NE) and multiple selection (Binmore 1991, Fudenberg and Kreps, 1993, Samuelson and Zhang 1992). Evolutionary games were developed as a distinct class of economic games based on the pioneering research of Robert Axelrod (1997). The class of evolutionary game was designed to reflect gain survival and maximization. Evolutionary game models are suitable to explain the existing interaction in a large population of individuals. Many of the applications of biology on routine, myopia and genetic transmission of behaviors can be successfully applied today in business (Gould 2002). Based on the dynamic behavior of systems in the long run and on aspects related to learning and development, we are witnessing an expansion of the range of economic applications of evolutionary game which include: models of cooperative and non-cooperative games, repeated games, sequential games, stochastic differential games, and progressive games. Among these are distinguished as important the stochastic evolutionary games providing a simple framework for describing strategic interactions between a large number of players providing static stable equilibrium (ESS) and dynamic replicator (Tembine 2007). In the literature in the field the evolutionary games are becoming more present although their economic applications are still quite isolated (Friedman 1991, Maynard-Smith and Szathmary 1999, Hofbauer and Sigmund 2003 Tembine H. et al., 2007). Further we analyze the evolutionary game model by studying the delayed dynamic evolutionary games. The evolutionary game model studies the behavior of populations made up of a large number of individuals who repeatedly engage in strategic interactions, the result of every individual depending not only on his/her own choice, but also on the choice of others (Samuelson and Zhang 1992; Sandholm 2010 ). Regarding the durability of cooperative behavior between individuals the evolutionary game model uses the prisoner's dilemma game in studying the development of the cooperation behavior between individuals (Zhang's., 2011, Zhang et al. 2011, Zhen and Perc 2010).

In a real competitive environment affected by risk and uncertainty, there are considerable differences in performance between firms that interact in the market. The dynamic model associated with evolutionary games can be studied using the tools of dynamical systems theory, the stochastic processes theory and the game theory. An evolutionary game expresses a formal model of strategic interaction, characterized by the fact that there will often be chosen strategies that generate high gain at the expense of the ones generating lower gain, and the players will not influence the future actions of other players (Friedman 1998).

#### **4. A study of the “hawk-dove” game’s dynamic replicator**

The dynamic Replicator describes the frequencies by which various adopted strategies may vary over time (Alboszta and Miekisz 2004, Friedman 1998) and the players’ gains depend on the frequency with which strategies are adopted within a population (Yi, T., Wang, Z., 1997).

Starting from the evolutionary game characteristic, i.e. the time evolution of strategies, in the literature in the field we identify the problem of the discrete approach of the dynamic replicator, the study of the conditions necessary for the for stability and the introduction of the delay in two different models: the social model and the biological model (Alboszta and Miekisz 2004).

Tembine et al. (2007) conducted a presentation of the dynamic replicator by which they described the evolution of strategy frequencies within the population and they studied the stability of the equilibrium point depending on delays. This study will continue in this pattern, taking into account the stochastic case in addition.

In the dynamic evolutionary games checked will be usually only the conditions for which the equilibrium is stable. In the proposed model we shall study the effect of delay on the stability of the dynamic replicator. The delay occurs due to the fact that the outcome of a decision is not instantaneous, so there is a period of time between the decision and its effect.

We consider that each pure strategy corresponds to a delay. We consider an infinite population of players, and each player chooses a pure strategy out of the S set of strategies where  $S = \{1, 2, \dots, n\}$ . It is assumed that only pure strategies are considered, i.e. each player chooses one strategy only.

The matrix of gains will be noted with A. Because players will interact in pairs, the matrix A is expressed by the relation:

$$A = (ka_{ij}), i, j = 1..n,$$

Let  $x \in \mathbb{R}^n$  be the n dimensional vector, called the state of the population, for which the component  $x_i$  is the frequency by which the strategy "i" is adopted.

The gain function of the player following the strategy "i" and "f<sub>i</sub>(x)",  $i = 1..n$  is given by the relation:

$$f_i(x) = k \sum_{j=1}^n a_{ij}x_j$$

If a player chooses the "i" strategy at a certain time "t", then the expected gain is expressed by the equation  $f_i(x(t - \tau_i))$ , where  $\tau_i$  is the delay corresponding to strategy "i" and  $x(t)$  is the state of the population at the time "t".

The dynamic replicator is given by the equation (1):

$$\dot{x}_i(t) = x_i(t)(f_i(x(t - \tau_i)) - F(x(t))), \quad i = 1..n \quad (1)$$

Where:  $F(x) = \sum_{k=1}^n x_k(t)f_k(x(t - \tau_k))$  is the medium gain of the population.

Strategies that generate higher expected profits quickly spread at population level.  $X_0$  will be considered as the equilibrium. The right side of the system (1) is equal to zero in the  $x_0$  equilibrium point. Thus, the following conditions occur:

$$x_{0i} = 0 \text{ sau } \sum_{j=1}^n a_{ij}x_{0j} = \sum_{k=1}^n \sum_{l=1}^n a_{kl}x_{0k}x_{0l}, \quad i = 1..n$$

Further shall be considered the simplified case with only two strategies for which the matrix for gains is  $A = (ka_{ij}), i, j = 1, 2$ , and the gain functions associated with each strategy are:

$$\begin{aligned} f_1(x(t - \tau_1)) &= k(a_{11}x_1(t - \tau_1) + a_{12}x_2(t - \tau_1)) \\ f_2(x(t - \tau_2)) &= k(a_{21}x_1(t - \tau_2) + a_{22}x_2(t - \tau_2)) \end{aligned} \quad (2)$$

The medium winning of population  $F(x)$  is provided by the relation:

$$F(x(t)) = k(x_1(t)(a_{11}x_1(t - \tau_1) + a_{12}x_2(t - \tau_1)) + x_2(t)(a_{21}x_1(t - \tau_2) + a_{22}x_2(t - \tau_2)))$$

Considering the assumption that each player takes a single pure strategy, we determine the dynamic replicator expressed by the equation (3):

$$\dot{y}(t) = -kdy(t)(1 - y(t))(\alpha y(t - \tau_1) + \beta y(t - \tau_2) - y_0) \quad (3)$$

where:

$y(t) = x_1(t)$  represents the frequency of players who adopt a strategy at the time  $t$ ,  
 $0 < y_0 < 1$  and  $y_0$  is the only equilibrium point:

$$d = a_{21} - a_{11} + a_{12} - a_{22}, y_0 = \frac{a_{12} - a_{22}}{d}, \alpha = \frac{a_{11} - a_{12}}{d}, \beta = \frac{a_{21} - a_{22}}{d}$$

In “hawk-dove” model game, analyzed by Smith and Price (1973), the “hawk” is represented by players who adopt strategies of aggressive type, while the “pigeon” is represented by the players who adopt peaceful strategies. The model of the “hawk-dove” game serves to analyze the conflict between aggressive and peaceful strategies.

The numerical simulation was performed with two players, each player having only two strategies. Implemented on a duopoly market, the “hawk-dove” game refers to two firms which have to choose between two types of strategies: non-cooperation on the market (NCI) and market cooperation (Ci).

Ordering the four outcomes of the game can get the game winning matrix of “hawk-dove” type, shown in Figure 1.

		The player B	
		NC <sub>B</sub>	C <sub>B</sub>
The player A	NC <sub>A</sub>	(-0.5;-0.5)	(1;0)
	C <sub>A</sub>	(0;1)	(0.5;0.5)

**Figure 1:** The matrix of gains for the “hawk -dove” game

Figure 1 shows that in the case of the classic game of “hawk-dove” type (Smith and Price, 1973), the matrix for gains (A) integrates the following components:

$$a_{11} = -0.5, a_{12} = 1, a_{21} = 0, a_{22} = 0.5. \quad (4)$$

In this particular case the dynamic replicator will be given by the equation (5):

$$\dot{y}(t) = -kdy(t)(1 - y(t))(1.5y(t - \tau_1) - 0.5y(t - \tau_2) - 0.5) \quad (5)$$

The equilibrium point of the dynamic replicator's equation (5) is  $y_0=0.5$ .

## 5. In conclusion

In conclusion, the theories of the firm contribute to the foundation of explanations regarding phenomena of the real economy. By their use, as a frame of reference in representing the behavior of economic agents, these opened the way for a large field of investigation.

The problem of microeconomics is not to study the functioning of markets anymore, but to examine the ways in which firms can coordinate their decisions based on dynamic configurations in a competitive environment affected by risk and uncertainty.

The developments registered in the field of the theory of the firm lead to the conclusion that economics opens a large research area that can certainly be extended towards advanced economic research.

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## BEHAVIORAL ASPECTS IN THE INSURANCE MARKET

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Phd.Coordinator Prof.Viorel Cornescu; proiectului POSDRU/107/1.5/S/82514, cu titlul "Doctoratul în științe fundamentale - începutul unei cariere de vârf în cercetare "

**Abstract:** *The insurance industry has an essential economic importance. In spite of the great progress, we have to emphasize that the existing theoretic models cannot entirely explain the mechanism of the insurance market and of its decisional process, especially in the case of the events with low probabilities. That is the point where the behavioral economists come with a larger view of the factors that influence the consumer decision explained through the Prospect Theory of Kahneman and Tversky, through the Cumulative Prospect Theory that represents an enhanced view of the Prospect Theory and Prelec function. The concept of utility is also detailed in some extent in this paper contributing to a larger perspective about decision in insurance market and its role in the development of insurance market. Prospect theory tries to emphasize the role of psychological effects upon the consumption decision showing that the economic agent does not have a rational behavior and is not risk averse in all situation. In this paper there are showed and debated some situation in which psychological effects like loss aversion, reference point, status-quo and framing effects can influence the decision of the consumer and are not consistent with the standard economic model. In addition to this aspects, Cumulative Prospect Theory enhance the fact that decision makers overestimate low probabilities and underestimate high probabilities, thus buying inadequate insurance in many situation. In this sense, in order to support this idea I tried to make a qualitative presentation of the model used on the insurance market using Prelec function which is the function related with the Cumulative Prospect Theory which can be used in the insurance context. The weak points of the theory of expected utility are explained through this new perspectives and nevertheless aspects like insensitivity to bad news concerning incomes, elasticity of price, displacements of status-quo and default, disposition effect and equity premium are taken into consideration. As example, I chose a Kunreuther experiment about insurance decision in which is underlined the fact that for moderate risk people buy insurance with premiums that exceed the expected loss. There are demands for low deductibles in the markets for extended guarantees and insurances for mobile phones where was observed that the insurance underwriting rate increases with the probability of loss keeping the expected loss constant. It is better to mention that the theory and the model that are presented here comes as complementary to the economic standard theory not as a substitute.*

**Keywords:** *Insurance market, Prospect Theory, Cumulative Prospect theory, consumer decision, estimated probabilities, expected utility*

**Jel:** D03.

## 1.Introduction

In the insurance market people are supposed to act as rational human beings and have a tendency for risk aversion in all situations. But as we will see this is not a general law and people tend to avoid insurance and misunderstand the probabilities. They take different reference points related to their wealth or emotional stimulus and because of this tend to overestimate low probabilities and underestimate the high probabilities thus making vicious insurance decisions.

There are several standard theoretical statements regarding insurance decision and behavior in the insurance market, namely:

- decision makers overestimate low probabilities and underestimate high probabilities.

- decision makers tend to ignore very low probability events and cataloged events with very high probability of occurrence to be sure.

- the consumers buy inadequate insurance in spite of the low probabilities

- even if the first is correct, incorrect or subsidized actuarial point of view is likely to continue insurance under reduced dramatically since the probability of loss decreases and loss probability increases, keeping constant the expected loss.

The most popular theory of decision, expected utility theory predicts a much insurance and contradicts all the axioms postulated in above. For example, a risk averse decision maker will buy full insurance if the premium is actuarially correct. In contrast, Kunreuther (, Insurance decision making and market behavior, 2005) found that only 20% of some individuals in an experiment buy insurance at correctly calculated premium, if the probability of loss is 0.001. Moreover, rank-dependent utility and cumulative exploration theory was developed to provide better explanation of embedded risk behavior. There are probability weighing functions, one example being set by Prelec function to estimate probabilities (1998), which is consistent with the first axiom.

Kunreuther's study provides striking evidence regarding the purchase of insurance by individuals of inadequate insurance against events with low probabilities such as earthquakes, floods or hurricanes in areas exposed to these hazards. (Schoemaker, Kunreuther 1978)

Expected utility predicts that consumer will buy full insurance if the premium is actuarially fair in terms of all reported the following results probabilities. Kunreuther experiments presented various potential losses at different probabilities, keeping constant the expected value of the loss. Contracts included correct, incorrect and subsidized premiums, lead to the conclusion that in any case there is a point at which the subscription drops dramatically as the probability of loss decreases and the magnitude of the loss increases, keeping constant the expected loss. The potential insurance clients could be less aware of the losses involved in the process or could be subject to moral hazard. Lack of interest in buying an insurance remained active despite government attempts to: provide grants to counteract transaction costs, reduce premiums under actuarially fair rates, to provide reinsurance to companies or to provide relevant information. A good reason underlying insurance underwriting deficit is the lack of interest from the consumers. In different contexts, people ignore low probability events that can, in certain cases, to create a significant loss. Since many of these losses are imposed by consumers themselves because of individual actions, people choose not to insure. For example, people were reluctant to use their mandatory seat belts despite the evidence that they save lives. By 1985, only 10-20% of drivers wore seat belts, so denying their own safety.

## **2.The weak points of Expected Utility in explaining insurance behavior**

A major challenge is that individuals underinsure low probability events and overinsure moderate risks. For moderate risk they buy insurance with premiums that exceed the expected loss. Examples for this are demands for low deductibles, the markets for extended guarantees and insurances for mobile phones. Thus keeping the expected loss constant the insurance underwriting rate increases with the probability of loss. There is a standard expected utility theorem that says that individuals will fully insure if they have received the correct actuarial premium. Expected utility, gives a completely rational explanation of the phenomenon of underwriting. This has the implication that if the total provision is considered necessary, should be encouraged by subsidies or stimulated law. Expected utility is unable to explain certain insurance phenomena. First Kunreuther found that only 20% of subjects in the first experiment subscribe if the premium is fair and the probability of loss is 0.001. This theory was widely accepted and implemented as a descriptive model of economic behavior, as well as the model of rational choice, this means that the theory assumes that rational people would want to follow the theory axioms and, generally, they do this. Second, expected utility cannot explain why many people bet and ensure them simultaneously. The amount of gain or insurance makes it difficult to dismiss this behavior. Thirdly, the expected utility predicts that a risk averse decision maker will always buy insurance even if the premium is not equitable. However, many people do not buy insurance, even if they are available, especially for events with low probabilities. Fourthly, when first confronted with unfair premiums in terms of actuarial, expected utility predict that a decision maker is indifferent between full insurance and non-insurance and will prefer probabilistic insurance. Guilty for underwriting is a bimodal perception of risks which could provide an explanation in this sense. Some individuals focus more on probability, others do not pay attention to the loss. The first don't pay attention to the size of losses that fall below a certain threshold probability, while for last dimension of loss is relevant. Thus, the first are more likely to ignore insurance, while the latter ones buy for low probability but significant events. One of the problems is that the demand for insurance underwriting is determined by the loss, if the reference point is given by the initial wealth. Difficulties in the expected utility theory are raised by the emergence of a number of alternative for this theory. The most notable are rank dependent utility theory (Quiggin, 1982, 1993) and cumulative theory exploration. (Tversky and Kahneman, 1992). Unlike expected utility, the rank utility dependent theory of cumulative exploration functions are used for measuring the probability,  $w(p)$  to overestimate small probabilities and underestimate high probabilities. A function that is similar to  $w(p)$  which is consistent with many of the proofs of non-probability extreme events is the function of Prelec (1998).

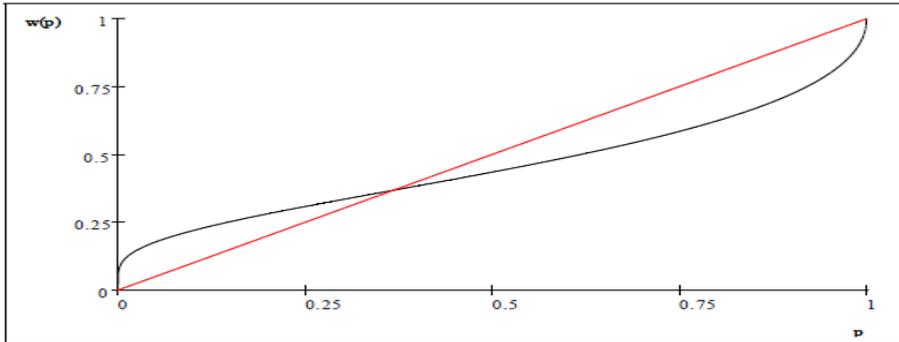


Fig.1.Prelec function

Source: :*"The behavioral economics of insurance"*, Ali-Al Nowaihi, Sanjit Dhami, University of Leicester

The decidents who use the rank dependent utility and cumulative prospect theory fully insure even in the case of a probabilistic low loss, in the case of an actuarial unfair premium and the fix cost of the insurance and if participation constraint is satisfied.

Utility theory rank and cumulative theory exploration could explain the above four axioms given that:

- during the editing phase, decision makers choose which improbable events to treat as impossible and which to treat as being sure. "because people are limited in their ability to understand and evaluate extreme probabilities, unlikely events are either ignored or overstated, and the difference between high probability and certainty is either neglected or exaggerated." (Kahneman și Tversky-Prospect Theory,1979:283)

- in the stage of decision / evaluation following that of publication, makers apply psychological theory lotteries already psychological editated.Choosing to ignore low probability events during the editing phase, decision makers do not require insurance for such events during decision-making.

- Axiom captures Prelec's function as the makers overestimate low probabilities and underestimate high probabilities, but invalidated by the second the small probabilities and large ignored deemed reliable.

- If you change heads and Prelec's function is considered as the editing phase of the evaluation were synchronized, the result will be composite Prelec's function

Those who use composite Prelec function will ignore low probability events by assigning subjective values to this.So, they will not buy insurance for low probability events unless are mandatory for a probability interval, policymakers overestimates the probabilities. Tversky and Kahneman cumulative theory introduced in addition to the Theory prospecting prospecting by completing the following: the psychological-editing phase which resulted, among other things, that events with small probability that are ignored should be eliminated.

Cumulative transformation of probabilities replaced the transformation point of Prospect Theory, a decision-maker who uses cumulative theory exploring options will never choose the dominant options in a stochastic manner.With other words, the

theory of cumulative prospect theory is nothing but prospect Theory complemented with composite function Prelec. Kunreuther argues otherwise: "The main reason for market failure is that most people do not use insurance as a means of risk transfer them to others, this behavior is caused by the refusal of people to worry about losses whose probability is below a certain threshold. "

The model that follows explain how the decision in insurance can be made when we have in consideration a certain loss and an interval of probabilities of (0,1). There are also put the conditions if the premium is fair or unfair and which are the effects of this fact upon the insurer's decision. In this context, it can be seen how Cumulative Theory define the utility and disutility function in this insurance context.

### 3. Model

Suppose that a decision maker may suffer a loss  $L > 0$ , with probability  $p$  belonging to  $(0,1)$  in these conditions can buy a cover  $C$  belonging to the interval  $[0, L]$ , at a cost  $rC + f$ , where  $r$  belongs  $(0,1)$  being first rate and  $f \geq 0$  fixed cost of insurance. (Ali-Al Nowaihi, Sanjit Dhami, 2010)

Insurance premium rate  $r$  is:  $r = (1 + \theta)p$  where  $\theta = 0$  corresponds  $p$ . Under fair actuarial and if  $\theta > 0$ , an incorrect actuarial conditions.

In other words, wealth maker is:  $W - rc - f$ , with probability  $p$

$W - rc - f - L + C \leq W - rc - f$ , with probability  $1 - p$

Let  $U_i(C)$  utility decision maker when deciding to buy a certain amount of insurance coverage,  $C > 0$ . Fie  $C^*$ , the optimal level of insurance coverage, Uni maker utility if he decides not to buy insurance, then decision maker who buys  $C^*$  satisfies the participation.

$$U_i \leq U_i(C^*)$$

The four main features of the theory of cumulative exploration (CP) are:

- In CP, unlike rank-dependent utility theory and the expected utility, utility determinants are the level of wealth, assets or property, but the difference between them and reference point. Reference point is usually, but not necessarily represented by status quo.

- the utility function is concave for gains exploring theory and convex for losses (decreasing sensitivity).

- disutility of loss is greater than the utility gain of the same size, it illustrates the loss aversion.

Probabilities are transformed so that small probabilities are overestimated but higher probabilities are underestimated. Considering the wealth level  $y$  and a reference point  $r$ , transformed variables  $x = y - r$ , where wealth is relative to the reference point.

CP utility function is defined on  $x$ ,  $x > 0$  is a gain when  $x < 0$  is a loss.

Utility function of CP,  $v(x)$  ( $-\infty, \infty$ ) is a continuous function, satisfying increasing reference point dependence  $v(0) = 0$ , decreasing sensitivity for gains  $v(x)$  is concave for  $x \geq 0$ , decreasing sensitivity loss  $v(x)$  is related to  $x \leq 0$  and aversion to loss- $v(-x) > v(x)$  for  $x > 0$ .

A popular utility function is axiomatic theory of cumulative exploration of the form:

$$v(x) = x^\alpha \lambda$$

$$- \lambda (-x)^{\beta} \lambda$$

The vast majority of the elements of this theory are important precedents, particularly through contributions of Markowitz (1952) and Allais (1953). Theory models exploring refers to choices that split the process into two stages: the first stage involves "editing" and the second phase involves "evaluation". Using an editing stage

is the most obvious feature of the PT. The second feature that distinguishes PT these theories is that the results are measured in terms of gain and loss relative to a certain reference point. In PT results are defined relative to a reference point that serves as "zero point" scale of values. It is often assumed in the analysis that the relevant reference point in assessing the gains and losses is the current wealth or welfare, but not always so. In particular, the relevant reference point can be expected status rather than current.

Expectations play an important role in the phenomenon of reference point. When people expect to receive a salary increase of 10%, for example, but receive only 5%, they tend to be disappointed. Their point of reference in this case is given by how much money currently receive, but as expects, so they encode and evaluate additional percentage of 5% as a loss rather than a gain.

Prospect theory complements other classical theories, especially the theory of expected utility in which the deviations from standard economic behavior are explained by introducing individual psychological mechanisms that explain consumer decision of the individual, such as aversion to loss function weighting decisions, framing effects, anchor effects, contrast effects or reference points .It wants to create an overview on consumer behavior especially in decision situations under risk and uncertainty.

In the table below, we can identify anomalies referred in Prospect Theory inconsistent with Expected Utility phenomena, phenomena involved and anomalies in accordance with the classification of belonging and Prospect Theory indicate those elements that are relevant to explain those anomalies.

<b>Phenomen</b>	<b>Domain</b>	<b>Description</b>	<b>Elements in PT</b>
Equity premium	Share market	Profitability of actions is too high in relation to the bonds	Loss aversion
Disposition effect	Share market	Keeping too long to actions that go to loss and resale of winning one	Loss aversion,reference point
Slope decreasing labor supply	Work economy	New York taxi drivers give up on working once they have reached the target	Loss aversion
Asymmetric elasticity to price	Consumer goods	Purchase is more sensitive to price increases than to decrease	Loss aversion
Insensitivity to bad news concerning incomes	Macroeconomy	Consumers decrease their consumption	Loss aversion, reference point

displacements of „status qvo” and „default”	Consumer’s choice	Consumers does not change health plans: choosing insurance that was before	Loss aversion
Effect “end of day”	Betting on horse racing	„Shift to long shots at the end of the day”	Reference point Depict marginal sensitivity
Favorite-long shot bias	Betting on horse racing	Favorites are under bet; „long shots” are over bet	Estimating the decision: overestimate low probabilities
Buying insurance by fax	Insurance	Consumers buy insurance at inflation prices	Estimating the decision: overestimate low probabilities
Loto demand	Loto bets	More tickets sold is as grand prize grows	Estimating the decision: overestimate low probabilities

**Table 1** „Inconsistent phenomen with EU” Source: “An introduction to behavioral economics-a guide for students”, Nick Wilkison,p.87

Expected utility theory is also difficult when you have to explain the different attitudes we encounter relative to insurance. A buy insurance involves risk aversion, as they say in utility theory. However, the assumption that the utility function is concave in the area where is located the assets making utility theory to imply a universal attitude of risk aversion. This is in contradiction with the fact that many people prefer insurance policies offer limited coverage with low or no deductible, to policies that provide maximum coverage with high deductibles. So, buying insurance is in itself evidence of risk aversion, but some insurance policies that can be of great popularity, may be inclined to risk than others.

There is another phenomenon linked to insurance which seems to be an anomaly for both prospect Theory and for Expected Utility. This attitude towards the provision of probabilistic insurance. For this type of policy purchaser pays only a fraction of the price of full insurance, but only receives payment probability of the same fractions if the event occurs. It seems that such a policy involves more risk than standard insurance. Empirical evidence of Kahneman's study shows that such insurance are not popular, which seems to contradict the predictions of the model PT. This apparent anomaly of PT, with some tendencies towards risk taking in earnings can be explained only by a discussion of weighting decisions.

**Conclusions:**

-Prospect theory and Cumulative theory try to explain the consumer behavior in the insurance market taking into consideration the inconsistent phenomen of Expected utility theory in this context like: Insensitivity to bad news concerning incomes, elasticity of price, displacements of status-quo and default, disposition effect and equity premium.

-there are taking into consideration the aspects that Expected Utility theory cannot explain such as: decision makers overestimate low probabilities and underestimate high probabilities, decision makers tend to ignore very low probability events and cataloged events with very high probability of occurrence to be sure, the consumers buy inadequate insurance in spite of the low probabilities.

-even if the first is correct, incorrect or subsidized actuarial point of view is likely to continue insurance under reduced dramatically since the probability of loss decreases and loss probability increases, keeping constant the expected loss.

-cumulative transformation of probabilities comes as a transformation point of Prospect Theory, a decision-maker who uses cumulative theory exploring options will never choose the dominant options, the theory of cumulative prospect theory is nothing but Prospect Theory complemented with composite function Prelec.

- Prospect theory complements other classical theories, especially the theory of expected utility in which the deviations from standard economic behavior are explained by introducing individual psychological mechanisms that explain consumer decision of the individual, such as aversion to loss function weighting decisions, framing effects, anchor effects, contrast effects or reference points and Cumulative Prospect theory tries to explain why small probabilities are overestimated but higher probabilities are underestimated.

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## A NEW CHALLENGE IN EU: EFFECTIVE FINANCIAL EDUCATION

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**Abstract:** *The main aim of the paper is to highlight the importance of financial and business education in the context of the more and more complex and dynamic economic and social systems specific to the modern societies. Financial literacy is a need for people responsible for the way money are managed in a competent way (both their money and other people money with a special dimension on the local/regional and macroeconomic levels). The decisions people made in respect with the money have impact on both short-term and mostly long-term future. Their responsibility and the risks assumed increase as long as employers and government responsibility and assumed risks in this respect might decrease in some cases. The paper is mostly design as a theoretical paper based on literature review and critical research and critical thinking methods. Based on the literature review the paper had identified the most important principles of financial education and illustrates some of these principles such as: active long life learning; oriented based mostly on individuals needs; connected with the early economic education provided both by formal education institutions (schools) and by non formal and informal training programmes like the one provided by NGO (such as Junior Achievement, CREE etc.) where basic concepts on financial issues have an important role; risks oriented. These principles and mostly the ways and forms to provide financial education both within a formal and non-formal framework are debatable subjects and critical thinking and comparative analyses might be fruitful into this respect. In Romania, financial education is in the majority cases part of the school based curriculum. The Ministry of Education recommends that all the educational institutions interested in delivering financial education programs within their schools have to develop also a syllabus for an optional subject that might focus on financial issues. Banks are also interested to contribute to the financial education. They might help schools in conducting financial education programs and, additionally, they developed their own financial education programs. Local and regional institutions are also very important and mostly from the long-run perspective they might make the difference for a sustainable development strategy where investment in life long learning economics, business and financial education have a crucial role.*

**Keywords:** economic education, financial education, financial literacy, competent money, school based curriculum, financial education programs.

**JEL classification:** A20, A21

## 1. Introduction

We consider that within a knowledge-based society and economy people do not have to look back to the economy of our childhood, but they have to be able to look forward to the economy of the future. Some authors may consider this statement challenging with respect to the financial education. But in fact financial education have to prepare people not just to register the performances obtained in the past (using complex financial and economic index). The financial education have to make people familiar with the expected evolution of future events when even the traditional concept of “money” will evolve and transform. *Competent money* will need people to be prepared to use money in a competent, effective and efficient way. And decision making with respect to money need not just a “reactive” way of thinking and behaving, but mostly an “anticipative” way to project the future, to take the proper decisions and to identify the most important expected consequences regarding how to use money in a competent way.

Within the modern society called the *new economy*, the *post-industrial economy*, the *creative economy*, the *knowledge-based society and economy* there is an important shift from the monetary flows towards the intangible one and from the physical and tangible assets towards intangible ones. Many of the new benchmarking methods are no longer applying just the monetary expression. Intangible assets and mostly intellectual (human, organizational, relational) capital are considered to be the real source of a long-run sustainable competitive advantage. More that 80 % of the value added of the “top” companies is extracting its value from the intangible assets. So this new framework addresses new challenges for economist and mostly for the financial sector and as an implicit consequence for financial and business education. Tacit knowledge, intellectual capital, knowledge management and other important endogenous source of a long-run sustainable development both on the micro-, mezzo- and macro-level are asking for a new paradigmatic thinking way with respect to money. New forms of money and new forms of trade and financial intermediation such as e-commerce, e-banking and many other new forms of exchange regard other perspective with respect to financial education. We need to need to encourage entrepreneurship, talent management and mostly the creative class to manifest in a creative way in accordance to the new perspective provided by the creative economy where the financial sector is also considered to be a special category of the creative industries.

Creative economy based on creative people, creative communities and innovative business are becoming relevant mostly during the amplified crisis. Some authors consider that crisis is the mother of invention and innovation. And many research studies had provided many examples of best practices with respect to the creative economy approach where the role of traditional money is changing in a significant way. New benchmarking like the *Global Innovation Index*, *Euro Creativity Index* or *KAM (Knowledge Assessment Method)* promoted by the World Bank rank countries performances no longer based just on GDP and other monetary index. Beyond GDP initiative adopted also on the European Union level in 2007 ask for an extension of the way we judge performance, efficiency, effectiveness and even rationality in the new economy context. Boundary rationality goes beyond traditional way of thinking. And it looks that we need a new way of thinking mostly if we want to face and to manage to realize the second part of the semantic meaning of crisis as a very challenging concept. We need even a new semantics where crisis does not mean

just damage. It regards mostly that people have to think in a positive constructive way and to realize that today crisis is very complex (moral, ethical, environment, demographic, economic, financial crisis co-exist and amplify their effects). As complexity science suggests, in order to cope with complexity we have to re-discover simple ways to deal with it. And mostly important we need to realize the second part of crisis semantics like in its old Chinese origin: opportunity to change something. This way of thinking applies also for money. In order to cope with the contemporary financial and economics issues we need a new paradigm with respect to money. And one of the most important ways to do this ask for a new paradigmatic perspective of financial education. Some of this new approach of the financial education as we manage to identify within the specialized literature are presented within this paper. Just some of them. We know that people use to look for mathematic, econometrics and statistical tools to be applied for scientific papers. But we consider that for emergent topics like the one we address before starting to apply a new /old econometric model we need to think in a new way. And this asks for a new way of thinking and acting in the context of new economy and knowledge-based society.

*Soft skills* are also important for financial education; mostly those that focus on problem solving, critical thinking, creativity, communication, team building. As suggested by Charles Lawton, chief economist for Planning Decisions Inc. in Maine *“the answer that emerges is that the model workplace of the 21st century is the Google playroom - a combination dorm lounge, cafeteria, artist studio, laboratory and playground. And the central skill is creativity-making connections and seeing the unknown, the perplexing, the out of order, the unexpected as challenging and fun. This new economic era will be far less dependent on geography and far more dependent on human ingenuity -a factor much more subject to our own public decisions”* (Lawton, 2013, p.2),

Lawton also suggests that the new monetary flows have to take much more into account the unique and original goods and services according to individual needs and not to the mass production like in the industrialized era: *„The last century was about standardization and mass production. The next is about individualization - of both product and production. Google's business model for its glasses-embedded computer is to give thousands away and ask people to find cool things to do with it. Instead of centralized control, the goal is crowd-sourced direction”* (Lawton, 2013, p.3).

The recent economic crisis emphasized how important is for individuals and families to have information, competences and adequate tools for making good decisions in a financial system that becomes more and more complex. The crisis showed that individual financial welfare is fundamental for financial stability at national level and that a poor financial education is one of the reasons for decrease in standard of living and prosperity. The weakness and difficulties face in order to promote a proper financial education in line with the new approach we highlighted before makes difficult for people to be informed participants in economic activities. This is the main reason that explains why financial education became a priority in European Union. As an additional argument we mention that in 2007, *European Commission* adopted *Communication COM (2007) 808*, that established basic principles in financial education programs that are presented briefly within the following paragraph.

## **2. EU principles for high quality financial education**

Based on pertinent analysis of existing financial education programs in EU, EU Commission established basic principles to help public authorities, suppliers of financial services, consumers organizations, employers, and other entities interested in conducting financial education programs at local or national level. These principles are consistent with nowadays approaches and methods designed in order to develop successful financial education strategies.

*Principle 1: Financial education has to be actively promoted as part of lifelong learning process.* Financial education programs have to be designed for youngsters and elderly as well and to empower people to face financial challenges they experience in their everyday life. Financial education programs have to be adapted to citizens' financial situation and understanding.

*Principle 2: Financial education programs have to be clearly oriented to people needs.* Achieving this objective depends on research conducted to identify the present level of financial knowledge individuals have and also the concepts, issues, and problems that need to be immediately studied. Financial education programs have to be available in time and accessible as well. They have to target people in specific situations and with specific needs: graduates searching for jobs, unemployed people, couples who want to become families, youngsters, people who want to borrow money and so on.

Accessibility is especially important in order to facilitate people access to information. Accessibility is a requirement for content (the information) and content format as well. Financial education can be delivered in schools or out of the school; it can be part of formal or non-formal education. Adult's financial education can be delivered also in partnerships with employers; it can be delivered at work places and may be focused on pension systems.

*Principle 3: Economic and financial education has to start as early as possible.* Financial education has to be part of school curriculum. In other words, schools have to provide financial education to students. It is important that financial education start as early as possible, even in elementary school. EU Commission has published a recommendation regarding key-competences in lifelong learning process (2006/962/CE) that advocates in favor of basic competences such as capacity to apply mathematical thinking in daily life situations, to understand deeper the economic mechanisms, or to plan and to organize your personal life. The recommendation explicitly asks educational authorities to support and promote economic and financial education.

*Principle 4: Financial education programs must create awareness to the need of financial information and financial risk understanding.* Consumers are not always aware of lack of information they have in respect with financial issues and risks. Making them aware is the first step to positively motivate people for financial education. Instruments such as self-assessment questionnaires or commercials for financial education may help to increase the level of people awareness. Informed people can be oriented to specific financial themes and issues.

*Principle 5: Financial education has to be balanced, transparent, and objective. Consumers' interests are always priorities.* Financial services sector has to be involved in financial education. Employers in this sector have to be encouraged to

take initiatives and to contribute to financial education with their valuable expertise. Financial services providers should make clear differences between general and financial education and financial counseling, and this has to be also clearly presented in educational materials developed.

*Principle 6: There should be available resources for effective financial education programs and trainers in this domain should be properly trained.*

In order to have effective financial education, the trainers who conduct such programs should be well prepared and trained. This is true not only for teachers in schools, but also for social assistants, banks employees, volunteers and all other categories of educators that act in public benefit. As consequence, training of trainers programs has to be designed and educational materials to be developed and adapted.

*Principle 7: At national level, all interested entities in financial education have to be involved. Roles have to be clearly defined so that experiences to be shared, and resource to be rational allocated.*

*International cooperation between financial education providers has to be enforced so that best international practices to be shared too.* There is no monopoly on financial education. Many entities work together to educate people in financial domain: school, financial services suppliers, consumers' organizations, family and other interested parties. This contributes to establish more clear objectives, target better specific groups, allocate more rational the resources, and to promote experiential learning. At international level, cooperation between financial education providers and establishing financial education networks would help identifying domain that need special attention and sharing best practices.

*Principle 8: Financial education providers periodically have to evaluate their programs and, if necessary, adapt them to the best practice identified.* Financial education providers periodically have to evaluate progress and results. If necessary, they have to make changes in their programs to achieve the highest standards existing in the domain. Consumers have to have access to specialized information that may guide them through complexity and diversity of financial services.

### **3. The role of financial educational programs in school and other educational institutions in the context of formal versus non-formal and informal life long learning**

Experts agreed many years ago that in Romania financial education in a need. There is consensus in recognizing that economic and financial education helps youngsters to a better management of personal finances. Young people who have developed an economic way of thinking are self-confident, capable to make better financial or carrier decisions and to act responsible as informed citizens. Financial educational is based on basic economic concepts and economic way of thinking and is designed as an authentic program of financial literacy.

*Financial education*, both for middle and high school level, is an optional subject proposed and approved by the Ministry of Education. It was proposed on the recommendation of *the European Parliament and EU Council* as a subject that can develop *key competences related to long life learning capabilities*. On the European Union level experts and decision makers suggest that each person must have, and also skills student must have, including: initiative, social and civic skills, or learning to learn.

Financial education is part of school based curriculum. Its objectives can be achieved by interdisciplinary approaches within the *Civic Education/Culture*, or other *Humanities* disciplines, namely the social sciences curricula. It has been taught, actually learned, since the school year 2011-2012.

The existence of a discipline that addresses the relationship between consumer characteristics and consumption was considered extremely useful, taking into account that Romania is one of the European Union countries where consumption is too high. Often, this was highlighted during the boom, when Romania's economic growth was based mainly on consumption and real estate sector growth that has been proved not being sustainable.

Conducting financial education programs in schools might leads to the development of skills/ competences such as: learning the main notions of consumption, and consumer behavior; ability of rational management the financial resources; ability of correct management of the personal budget or family budget out of which the student comes from; developing an active and responsible social behavior, adapted to economies in transition, rapidly changing; developing the spirit of saving, meaning that students should avoid excessive consumption behavior based on it would have certain skills that can make the difference between what is necessary and what is extra; cooperation with others to solve problems of economic, social, theoretical or practical nature which may arise in the community or in different groups in which the individual carries out its activity/ business. Therefore, financial education would create rational and informed consumer behavior related also to the economic characteristics of the environment in which they live.

Financial education focuses on recognizing the quality of goods and services, on ability to draw up a personal budget, effective allocation of financial resources and the decision made in respect with appropriate banking products and lifestyle habits. Because of these issues, it is considered that possession of such knowledge is essential in understanding how individuals act and how interdependent relationship between individual behavior and the economy taken as a whole are created. Financial education programs are developed traditionally around some basic economic concepts such as: money, incomes, consumption and savings (Tables 1 and 2).

Thus, first, there is a continuity of concepts acquired, a more detailed study of the passing of their secondary education at school. This is justified not only by mastering the basics in high school, but also a greater capacity for analysis and perception of the phenomena studied and their implementation in everyday life. In this respect, the main content Gymnasiums education is based on the concept of consumer, on the family budget, on how the financial needs can be met immediately or postponed by means savings or taking out a bank loan and the benefits and risks arising in relation to consumer-financial institution. To this, add other content, in the second stage of deepening that matter, the most important being how to use banking services (deposit, credit card, electronic bill payment partner services), awareness of ensure personal and property ownership and matters related to *the National Bank* and Romania to the euro changeover conditions.

Table 1: Most relevant skills and content recommended for the financial education curriculum within the middle school

Specific skills	Content
<p>Proper use of specific terms of the financial education</p> <p>Recognition the quality of a goods and services</p> <p>Budget management</p> <p>Identifying ways to save money</p> <p>Practicing, through team work, the allocation of financial resources to meet existing needs</p> <p>Showing a responsible attitude towards budget management</p> <p>Savings products and credit for parents and children</p> <p>Applying information about financial services in solving different loan situations</p> <p>Practicing, in teamwork, the use accurate and effective (digital instruments) means of payment in the country and across the Union European</p> <p>Developing skills of responsible analysis/ comparison of advantages and consumer risks in relation to bank</p>	<p><i>Consumer, family budget/ personal budget</i></p> <p>The middle school student as a consumer. Consumer rights and institutions that protect these rights</p> <p>Family budget. Personal budget. Income of the family. Personal income. Family expense. Personal expenses.</p> <p><i>Personal budget management</i></p> <p>Allocation of financial resources: needs that are be met immediately/ that can be postponed/ to which may be dispensed</p> <p>Money. Forms of money. Utility of money</p> <p>How to save money and reduce wastage of money.</p> <p>Consumer relationship with banks</p> <p>Money and banks.</p> <p>Opening/closing an account</p> <p>Savings and family projects.</p> <p>Modern means of savings. Savings tools for children (savings account for children).</p> <p>Consumer credit</p> <p>Means of Payment. Romania money. Other EU countries money. Credit cards.</p> <p>Benefits and risks of consumer</p>

Source: Romanian Ministry of Education, 2010

Table 2: Most relevant skills and content recommended for the financial education curriculum within the high school

Specific skills	Content
<p>Proper use of specific terms of financial education</p> <p>Identifying the personal needs and the family needs</p> <p>Personal budget and explain the structure of family budget</p> <p>Designing personal/family projects and making decision in different financial situations</p> <p>Designing, through teamwork, a personal /family monthly budget</p> <p>Identifying ways to save money</p> <p>Practicing, in group work, the decision-making skills on different options for saving and lending</p> <p>Development of skills related to safely use the various means of payment</p> <p>Developing the analyses skills of consumer's benefits and risks in relation to bank</p> <p>Applying the specific financial information analyzing and evaluating financial services</p> <p>Practicing, in group work, the use of banking services</p> <p>Development of skills related to safely use the banking services</p> <p>Responsible participation</p> <p>Explaining the role and main duties of NBR</p> <p>Explaining the conditions to be meet by Romania in the transition to the euro</p>	<p><i>Needs and persons and family projects</i></p> <p>Needs of individuals / families and how their coverage</p> <p>Income and spending; personal budget and family budgets</p> <p>Individuals and families financial projects. Money management. Money and banks.</p> <p>Surplus of money. Savings and their role in the personal budget.</p> <p>Bank deposits. Securities</p> <p>Deficit if money. Coverage options. Loans. Borrowing money. Cost of money borrowed. Cards. Types of cards.</p> <p>Risk prevention methods in terms of money management. Financial services for the population.</p> <p>Types of financial services: paying bills, online services, Internet banking</p> <p>ATM and its use.</p> <p>Insurance. Risks and insurance against risk. Mandatory and optional types of insurances: life, health, pension and educational children, travel, supplies in property</p> <p>Banks and risks prevention</p> <p>Banks system in Romania: financial institutions and banks.</p> <p>Banks and financial offers</p> <p>The National (Central) Bank: history, relationships with different financial institutions, and citizens.</p>

Source: Romanian Ministry of Education, 2010

Financial education is considered by many teachers of economics a 'weaker' form of economic education, meaning that just about some basic economic concepts and summarized in a basic level of analysis. Calling over the terms of everyday speech and, if possible, to limit the use of specialized language.

We consider that in order to promote a competent financial education educational programs need to be conducted not only by formal education institutions but also by the banks and non-governmental organizations

The issues outlined above, have resulted largely in theoretical characteristics of the subject of financial education. However, not only at the secondary education this approach there, but it is embodied in the various programs implemented by banking institutions or insurance companies. In this regard, recall the CSR policy of these institutions, which aims to inform citizens about certain features. Currently, programs targets young people from universities and colleges, in an attempt to support financial management and assimilation characteristics of products and services banking. The programs also advise anyone wishing to know deal with how to achieve a budget or how to use certain banking instruments. Other programs provide information about life insurance and about the financial planning.

#### **4. Conclusions**

Financial education is based on principles such as: active long life learning, individuals needs oriented, part of the early education provided by schools, basic concepts on financial issues and risks oriented. In Romania, financial education is part of school based curriculum. The Ministry of Education recommends all schools interested in delivering financial education programs schools a syllabus for an optional subject focused on financial issues. Banks are also interested to contribute to financial education.

Within other papers we provided additional practical evidence of the performances obtained by one of the non-governmental organizations where both authors of this paper are involved-CREE (*Centrul Roman de Educatie Economica-Romanian Centre for Economic Education*). CREE had been created in 2001 with the support of NCEE (*The National Centre for Economic Education from United States of America*) where both authors had benefit on two programs dedicated for "Training of trainers" and corresponding for "Trainers of Writers". This paper tries to support a new paradigmatic way of thinking. So we were not intending to provide a collection of data, econometric models, equations, regressions, graphs and other tools used by empirical studies. We applied these tools for other research. But the main purpose of this paper was to review the most relevant studies identified within the specialized literature and to try to ask first experts in the economics and finance research fields to debate these new approaches. Next, in a co-operation spirit we can develop also a more pragmatic vision and come with concrete results. We wanted first to benefit on the opportunities provided by participating to scientific events like the prestigious International Conference organized by our colleagues from the *Faculty of Economic Sciences from University of Oradea*.

Future research could be oriented to improve and to develop appropriately the present financial education curriculum. Specific content and methods could be developed, teachers guide and students centered materials could be developed. Both students and teachers would benefit.

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# THE ECONOMY IN BIHOR COUNTY IN THE CONTEXT OF THE GLOBAL FINANCIAL AND ECONOMIC CRISIS

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**Abstract:** *This paper proposes an approach of the relationship local-global in terms of the response of local economy to the challenges of the present economic and financial crisis. We reviewed some ideas from the specialty literature on the topic of the paper and we developed a case study on Bihor economy. We proposed to check to what extent the local economy has relevance in a globalized world. For this purpose we used the method of studying documents and we realized a comparative study of national and economic development in Bihor during the financial and economic crisis (2008-2011).*

*The analysis of socio-economic indicators for the period 2008-2011 in Bihor county shows a specific response of Bihor economy to the economic crisis, arising from the particular conditions that characterize this area. Even if there are elements of convergence with the general features of the global crisis, there are a number of features that enable a rethinking of the role of the local, of communities in future economic developments. Taking into account the economic and demographic particularities of Bihor county, the local authorities have developed strategies that enabled a superior utilization of local potential and the reduction of vulnerabilities.*

*Thus, in order to attract local and foreign investors, a network of industrial parks has been developed, along with providing facilities to potential investors. Located in the border area, Bihor county benefited from European funding opportunities specific to these areas, in this case HU-RO, which involved joint projects with the Hungarian areas bordering Romania, which were heavily accessed with visible results especially in the plan of SMEs, infrastructure, culture, education and health. Special attention was paid to energetic strategy as Bihor County has significant geothermal resources. Being a multi-ethnic and multi-religious county, a cultural strategy was considered appropriate, having as main objective the increase of quality, diversity, attractiveness of cultural life, intercultural support, stimulation of cultural performance, and the maintenance and restoration of cultural sites. Another strategy was developed in tourism marketing, as the tourism potential of the county is high, but poorly capitalized because of road, rail and air infrastructure, which is more precarious than in most areas of the country. The conclusions of the paper favor the idea of decentralization encouragement which allows greater flexibility and adaptation to "the present time", especially in terms of policies and strategies that can be shaped and implemented.*

**Keywords:** *economic and financial crisis, globalization, anti-crisis measures, socio-economic indicators, local- economy.*

**JEL Classification:** *E32, F63, G01, H70*

## **Introduction**

Even though we live in an increasingly globalized world, or maybe that's the reason why, the local or regional not only do not lose their functions and importance, but even reinforce them. Despite the growing and increasingly strong interdependencies among national economies that generate a certain uniformity of content, of response to similar situations, the regions continue to present a multitude of specificities deriving from the geographical or geostrategic location, environmental factors, economic and demographic structure, social and cultural capital.

An approach of the local economy in the context of a global economy can seem a superfluous approach, like "a drop of water in an ocean." At a closer glance, however, things are quite different, for at least two reasons: the local economy is more important to the community than the global economy, a fact suggested by Castells (2000a) when stating that only "elites are cosmopolitan, people are local" (Castells, 2000a:446); economic interactions are nowadays so numerous and complex that they justify such an approach. In addition, "global society is currently on an unsustainable path" (Mohareb, Murray, Ogbuagu, 2009: 1), as long as the need for raw materials, per capita consumption and population growth exceed the limits of sustainability.

The current economic and financial crisis reveals the presence of an autoimmune disease in the body of the global economy. A latent disease that has erupted when the loans have exceeded any limit, when "bubbles" in real estate began to burst, when the banks, amid some deregulations, so with the complicity of Governments, have excessively produced much play money, creating the illusion that money itself produces value, when banking imposed dictatorship. A disease favored by the out of control activity of TNCs and, even more sadly, by the involvement of scientists in the creation and development of speculative activities. The treatment, difficult to be prescribed, relied mainly on "drugs" discovered by Keynes as being effective in the case of the great depression of 1929-1933: a mixture of public policies that reduce taxation and budgetary spending and stimulate consumption

However, is it the same disease or are symptoms the same? Even if we admit that we're talking about the same pathology, the patient is a different one and requires a specific treatment. On the other hand, different forms of manifestation, like the different impact of the crises require specific measures for each country: United Kingdom stimulates employment, France supports those with low-incomes, Germany stimulates the renewal of the auto-park, Slovakia encourages part-time jobs instead of redundancies, Russia finances the interests of loans, Norway reduces taxation, Japan counts on green energy. Different measures that they have a common denominator: State intervention.

Paul Krugman, the winner of Nobel Prize for Economics in 2008, pleads for the rapid and massive intervention of the State to reinstate lending and boost expenses in order to overcome the decline in confidence in the banking system, as well as for a more careful regulation of banking activity, of stopping "shadow banking", warning in the book with the same title, on the return of "decline economy". Only the State, he argues has the necessary levers to prevent the appearance of "speculative bubbles" in economy, either financial, stock or real estate ones, which break eventually, with repercussions such as: the decline in investments, consumption, general demand, increased unemployment, declined living standards. (Krugman, 2009: 79, 173-175).

### ***Global and local in the contemporary world***

Systematized in the surprising expression that the world is a "global village" (McLuhan, 1962), globalization has emerged as a defining characteristic of the contemporary world, consisting of a wider process of integrating systems: economic, cultural, political, social, communicational, situation in which numerous works in various fields privilege the global at the expense of the local. Defined as an "intensification of worldwide social relations, which connect distant locations so that local happenings are shaped by events that occur many miles away and vice versa" (Giddens, 1990: 64), globalization has more an anomic nature rather than an organized, homogeneous one, which can generate a "clash of civilizations" (Huntington, 1998).

Although the globalization process began in the fifteenth century (Waters, 2001), we talk about it especially at the end of the 20<sup>th</sup> century, at the same time with the amplification of the phenomena that characterize it: relocation, movement and acceleration, standardization, interconnection, enhanced vulnerability (Eriksen, 2007). Unlike previous centuries, today globalization acquires, along with the economic dimension (meaning convergence of markets worldwide, accelerated capital flows, which escaped state control, transcend national borders) and a cultural and political dimension (Held et al. 2004), environmental, physical and mental dimension, amid the disappearance of trade barriers, mobility, communication, dissemination of information, the establishment and functioning of international institutions, of spatial and temporal barriers.

Globalization can be highlighted by means of several indicators such as: trade volume among the countries of the world, international mobility, capital flows, the number of Internet connections. These indicators, and many others that capture the phenomenon of globalization, have grown spectacularly in recent decades, which entitles the claim that "there is no old cartography. It has become an illusion" (Ohmae, 1995: 20) or "the end of geography" (O'Brien, 1992), meaning border permeability and penetrability.

An approach of the actual world in its complexity, can lead us to the conclusion that the levels: global, national or local, or as Manuel Castells said, "the space of flows" - abstract from social, cultural, historical point of view, and "the space of places" - which condenses human history and material culture (Castells, 1990: 14), coexist and intersect in contemporary society, that "the work process is globally integrated, but labor tends to be locally fragmented" (Castells, 2000b: 18). Hence the terms "fragnegration" (Rosenau, 1994) or "glocalization" (Robertson, 1995) that suggest, along with the phenomenon of homogenization, of interdependence, or even of response to these phenomena, that there is a process of reconstruction of the local, of retrieval and expression of identity.

There are even opinions that argue that regionalization, not globalization, is the element of the age (Czempiel, 1999) or that "globalization has gone too far" (Rodrik, 1997), that there are global problems (crisis, pollution, inequality etc.), while the solutions are mostly local, after the formula "think globally, act locally". It is an idea that is found in the work of Lester Brown (Brown, 2006: 286) who considers that "saving the planet" depends on the involvement of each of us.

The local is "internal, close, familiar, even intimate" (Bauman, 1998), determined in space and time, it gives identity and preserves traditions, it generates a sense of familiarity and safety. Moreover, it can be said that any manifestation of globalization "always has a local root, a particular cultural insertion, and, even if it is often spoken

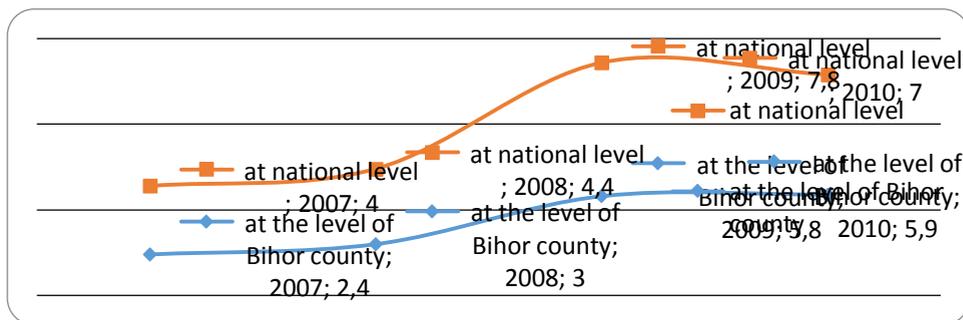
about relocation and deterritorialization caused by global changes, we must also consider that every movement is followed by a new rooting, a reterritorialization in another context "( Dimitrova, 2005: 6).

In other words, the local is not less important than the global, the two realities coexist, are complementary, situation expressed by terms such as: globalized localism (i.e. globalization of a local phenomenon) or localized globalism (meaning the local impact of a global phenomenon).

**The evolution of economy in Bihor county in the period 2007-2011. Similarities and specificities in relation to global economy**

With an area of 7544 km<sup>2</sup>, or 3.2% of the country and with a population of 594,615 inhabitants (2.76% of the population of Romania), Bihor county, located in the country's western border, as well as other counties in the same situation (Satu Mare, Arad, Timiș), has a number of specificities derived from its presence in the border area. One can talk about a higher purchasing power in the case of many of its inhabitants because of the opportunities to take advantage of leu-forint exchange rate and the prices in the neighboring country at certain times. Simultaneously, Oradea develops as a commercial city, the retail sales volumes increasing due to purchasers from the neighboring country. This situation is facilitated by short distances and by the lack of language barriers, as in the border area both languages are known, by both sides, at a level that allows individual trade and not only. In recent years demographic changes have intensified, it's true, mainly from east to west, from Romania to Hungary. Many Romanian citizens of Hungarian nationality sought and acquired the neighboring country's citizenship and, along with it, a series of accompanying rights, including the right to receive a pension granted by the Hungarian state based on the protocols between the two countries. A number of citizens from the border area, regardless of ethnicity have purchased homes and land in Hungary in favorable conditions both in terms of price and of infrastructure of localities, due to population migration in Hungary from east to west.

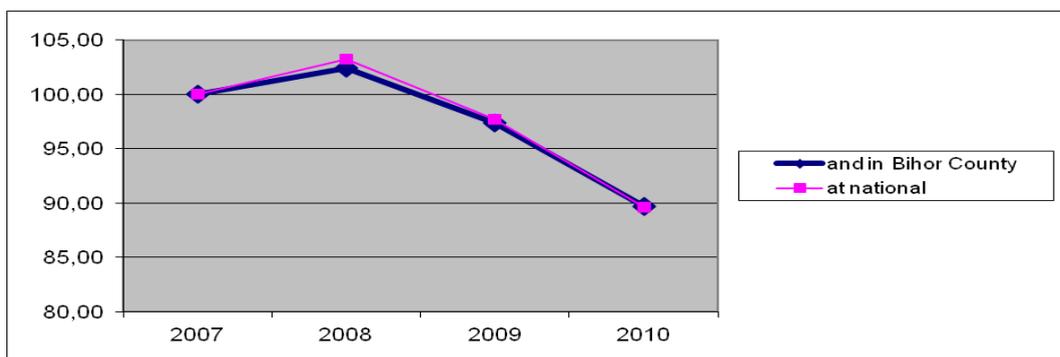
Also due to its geographical position, in addition to Bihor economic structure, we can talk about a relatively low unemployment rate (about half of the national average), and about fluctuations of local economic indicators compared to a predominantly linear-descendant evolution of the national ones.



**Figure 1.** Unemployment rate at national level and at the level of Bihor county  
Source: Romanian and Bihor county Statistical Yearbook

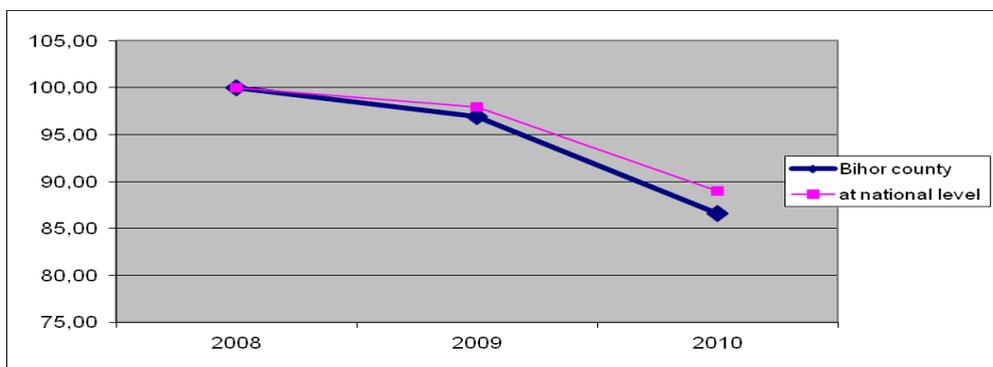
In these circumstances, the economic and financial crisis took on a slightly atypical form in Bihor county, it began to manifest only at the end of 2008, the early manifestations being related to production size restriction due to a decreased internal and external demand, increased unemployment and unemployment rate, decreased volume of international trade.

Industrial production, mainly concentrated in Oradea, is represented by: light industry, food industry, energy and machine construction industry, non-ferrous metallurgy - including mining, chemical industry, wood processing, construction materials industry. The diminished activity in industry was reflected in the average number of employees, which decreased steadily from 2008 to 2010, at the same time with the decreasing number of active local units (Figure 2,3) and the decrease with one-third of gross investment in these units in 2009 compared of 2008.



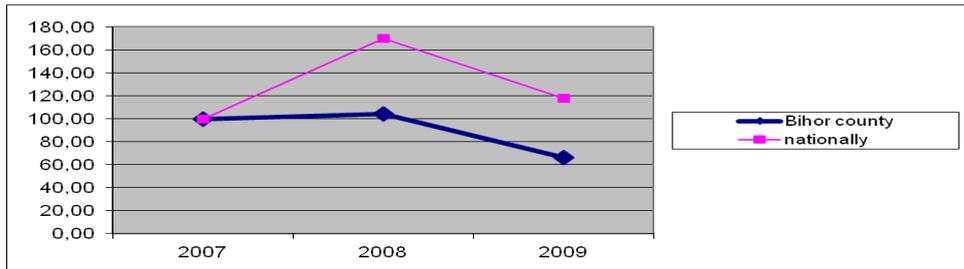
**Figure 2.** The evolution of the average number of employees nationally and in Bihor County (in%)

Source: Romanian and Bihor county Statistical Yearbook



**Figure 3.** The evolution of the number local active units at national level and in Bihor county (in %)

Source: Romanian and Bihor county Statistical Yearbook

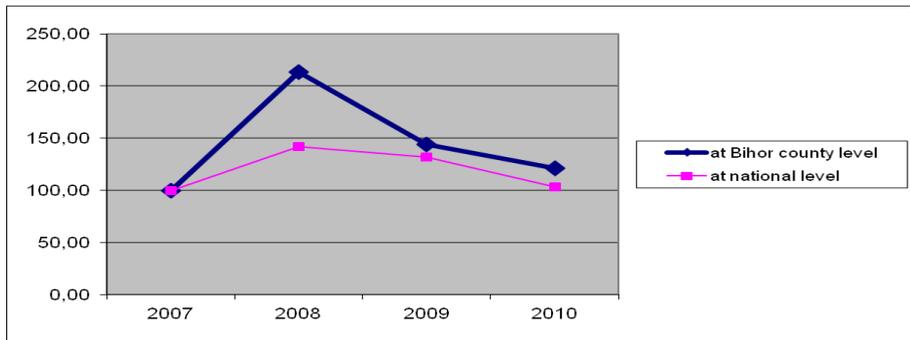


**Figure 4.** The evolution of gross investments in active local units, nationally and in Bihor county (in%)

Source: Romanian and Bihor county Statistical Yearbook

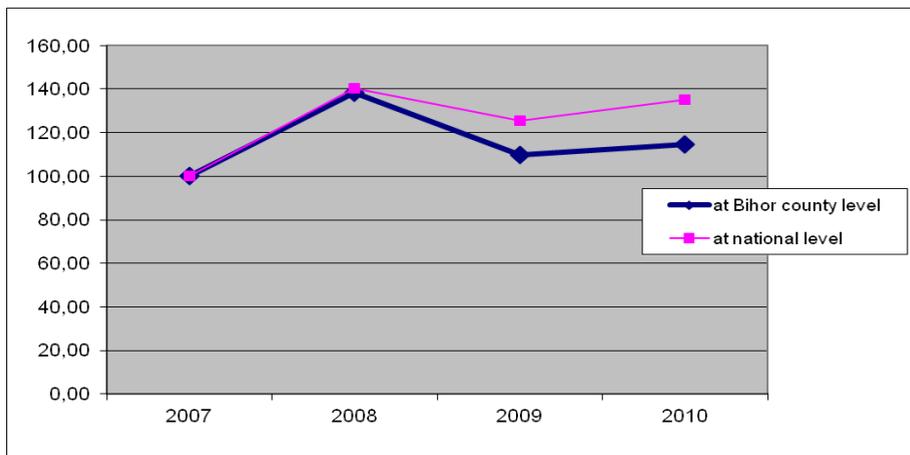
The figures above capture both "classic" and some particular relations, between situations and economic indicators. Thus, during the economic crisis some companies have temporarily or permanently ceased their activity in 2007-2009, while the remaining ones made larger investments in 2008 compared to 2007, after that the volume of investments decreased, which entailed an increase in the number of employees in 2008, followed by a steady decrease until 2010. However, we can see a difference in the evolution of economy at two levels: although the volume of investments (percentage) increased much more nationally than in Bihor county in 2008, the evolution of the average number of employees is similar. The conclusion concerns the efficiency of investment, much higher in Bihor county than the national average. It is an evidence of how the opportunities related to the local can be identified.

Not all industry branches are equally affected by the economic crisis. Some have followed the path of the global crisis, others have evolved in a specific way. In Bihor county, the first affected one was mechanical engineering (i.e. the parts for cars), but it has also been recovered first due to the "junk" program and the similar one in Germany that revived the domestic production of "Dacia" car. Construction followed, much later, and much less than in many other countries, probably because in Romania the construction boom occurred later. In Bihor county, even more than at national level, the number of completed dwellings increased greatly in 2008, then declined until 2010, but not below the level of 2007. The explanation could be seen on account of the return of many who work abroad and who have invested a portion of income in the construction of houses.



**Figure 5.** The evolution of the number of completed dwellings (in %) Source: Romanian and Bihor county Statistical Yearbook

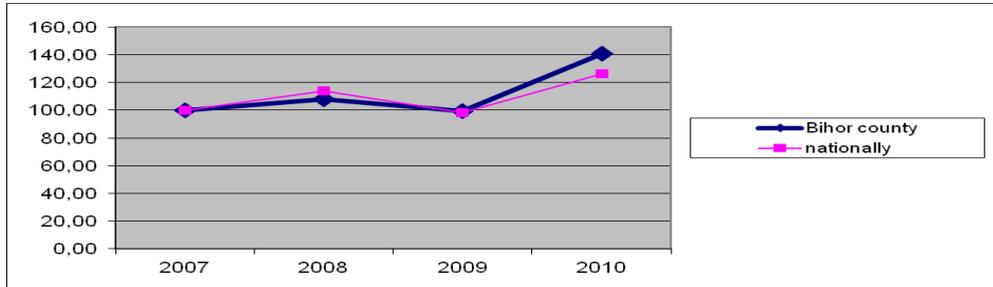
Regarding agriculture in Bihor, there are 497,167 ha of agricultural land, of which 3/4 is arable land (309,084 ha), of good quality, which favored the culture of cereals, Bihor county being ranked first in their production. Benefiting from large areas of pasture and meadows, and a tradition regarding livestock, this agricultural branch occupies an important share in the agriculture of the county. As a result, as well as at national level, the natural conditions favorable for agriculture, allowed an increase in the production of this economic sector, including a GDP growth from the results in agriculture, both in 2008 and 2010, as it can be seen in figure 6.



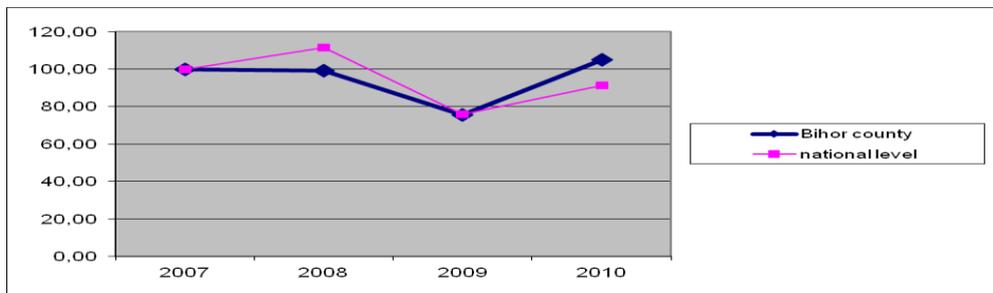
**Figure 6.** The evolution of agricultural production at national level and at the level of Bihor county Source: Romanian and Bihor county Statistical Yearbook

The economic crisis was felt in Bihor county also as a reduction in the volume and value of exterior trade, to a similar extent to the national development, drastically reducing imports in 2009, while maintaining a certain level of export, thus making it

possible to reduce the deficit of commercial balance. However, in Bihor county, an increase in 2010 of both imports and exports above the national average shows a more rapid and broader recovery of economy in relation to the national one as a whole. This can be attributed to Bihor economic structure, and also to the measures taken by local authorities to support the local economy.



**Figure 7.** The evolution of export FOB nationally and in Bihor County  
Source: Romanian and Bihor county Statistical Yearbook



**Figure 8.** The evolution of imports CIF (in%) at national level and in Bihor county  
Source: Romanian and Bihor county Statistical Yearbook

It can be said, based on the mentioned developments that, in the economy in Bihor, the economic crisis has some similarities with the general characteristics present at national or global level, but also some features embodied in a specific response, both of entrepreneurs and of local authorities.

### **Local anti-crisis measures**

The decrease of public confidence in state institutions, the more vivid presence in debates of ideas about "policy drift" (slip of public policy) as well as the increasing distance between political elites and citizens transfer to some extent the task of finding viable solutions to local administrations, which are closer to citizens, to their needs and possibilities.

Faced with manifestations of a profound, long and extremely complex economic crisis, local authorities were forced to assess the local impact of the crisis and to identify specific measures to overcome the difficulties yielded by this.

An EU survey on the responses of local administrations to the economic crisis (Anti-Crisis Policies in Regions and Cities Two Years On: public authorities working in partnership July 2011 Final Report) highlighted the concerns of public authorities and the solutions found by them to alleviate the impact of the crisis locally. Thus:

- A fifth of respondents said that the facilitation of attracting structural funds can be a useful measure in the crisis period (Anti-Crisis Policies..., 2011: 13)
- Half of them considered important to join efforts and information between local authorities and the private sector, especially SMEs (idem: 15)
- More than half rejected the assertion that "during the crisis it would have been a more active coordination of measures and exchange of information between cities/home regions and other cities/regions in the country or other countries (idem: 17)
- Concerning the attitude of local authorities in relation to the economic crisis, almost half of respondents said that the impact of the crisis on the local economy was evaluated, 71% said they had developed anti-crisis plans or local crisis monitoring (idem: 20-21)
- Only a third of respondents considered that local / regional needs can be found in the EU 2020 program (idem: 22)
- out of the anti-crisis measures adopted locally we can mention the following: financial support for SMEs, investments in research and development, measures to preserve existing jobs, measures to ensure the rapid (re) insertion in the labor market, measures to support the most vulnerable persons, measures to strengthen social protection and investments in social infrastructure and health, green investment, physical infrastructure, energy efficiency and the use of renewable energy, competitiveness of industrial base (idem: 23-26)

Taking into account the economic and demographic particularities of Bihor county, the local authorities have developed strategies that enabled a superior utilization of local potential and the reduction of vulnerabilities.

Thus, in order to attract local and foreign investors, a network of industrial parks has been developed, along with providing facilities to potential investors.

Located in the border area, Bihor county benefited from European funding opportunities specific to these areas, in this case HU-RO, which involved joint projects with the Hungarian areas bordering Romania, which were heavily accessed with visible results especially in the plan of SMEs, infrastructure, culture, education and health.

Special attention was paid to energetic strategy as Bihor County has significant geothermal resources.

Being a multi-ethnic and multi-religious county, a cultural strategy was considered appropriate, having as main objective the increase of quality, diversity, attractiveness of cultural life, intercultural support, stimulation of cultural performance, and the maintenance and restoration of cultural sites.

Another strategy was developed in tourism marketing, as the tourism potential of the county is high, but poorly capitalized because of road, rail and air infrastructure, which is more precarious than in most areas of the country.

(<http://www.oradea.ro/politici-si-strategii-ale-municipiului-oradea>, [www.cjb.ro](http://www.cjb.ro))

## **Conclusions and discussions**

The analysis of socio-economic indicators in the period 2008-2011 for Bihor county reveals a specific response of Bihor economy to the economic crisis, deriving from the particular conditions that characterize this area. The geographical position (of border county), the economic structure of Bihor (diversified, well represented in all three sectors: agriculture, light industry, food industry, energy and construction machinery industry, non-ferrous metallurgy - including mining, chemical industry, construction material industry and services), strategies on activity fields (industrial, agricultural, energetic, cultural, touristic) have determined, along with similar developments at national or global level, specific developments, resulting in a better adaptation and restructuring of activity according to the conditions imposed by the economic and financial crisis.

Even if there are elements of convergence with the general features of the global crisis, there are a number of features that require a rethinking of the role of the local, of communities in future economic developments.

The anti-crisis measures taken locally and, especially, the chances of supporting them with desirable results for local economies, favor the idea of encouraging decentralization, thus enabling a greater flexibility and adaptation to "new times", especially in terms of the policies and strategies that can be defined and implemented.

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## "NEW" AND "OLD" IN ECONOMIC NEOLIBERALISM

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**Abstract:** *In the evolution of economic history, the economic neoliberalism can be considered one of the most important. On the one hand, neoliberalism is a promoter of freedom in decision making process and competition. On the other hand, the market and its capability to supply information for the individuals and firms represents one of the central pillars for economic growth, development and profitability. Finally, we cannot ignore the diversity of neoliberal ideas, the number of promoters, and the global extension of neoliberalism. For these reasons, we consider that a short incursion in the history of neoliberalism is also actual and necessary. In the recent evolution of the neoliberal doctrine we can mention several important stages in the 20<sup>th</sup> century. During the first stage – between the first and second decade - Mises revived the School of Vienna, in his attempts to combat the concepts strongly promoted in the economic theory by the socialist doctrine. The second stage, comprised between the third decade and the end of the fourth decade, was an unfavourable period, during which the concepts of liberal orientation were strongly criticized. The third stage of the neoliberalism evolution, as a doctrine, can be placed between the last part of the fourth decade and the end of the fifth decade, having as object of debate the criticizing of the concepts launched in the economic literature by John Maynard Keynes. The fourth stage meant the entry of neoliberalism in a shadow cone, which lasted from the beginning of the 1950's until towards the middle of the 1970's, due to the popularity "enjoyed" by keynesism. The failure to apply the keynesist theories, declared in the second half of the 1970's, meant the entry of neoliberalism in an extended stage of development, which lasted until towards the end of the first decade of the 21<sup>st</sup> century. After year 2008, there are voices stating that the neoliberal principles are unable to find the answer to the world economic crisis and that, in fact, their promotion to such a wide scale contributed to this negative evolution of the economy.*

**Keywords:** *economic thought; neoliberal paradigm; economic neoliberalism.*

**JEL classification:** *B13; B25; B53.*

### **1. General aspects regarding the development of contemporary neoliberal paradigm**

The first aspect to is the idea that neoliberalism has as basis the need to grant greater freedom to economic agents, in view of ensuring the conditions for achieving an efficiency level as high as possible in the current activity, although this freedom is reached by imposing a certain kind of limits (Braunstein & Pepin, 2000). For the neoliberals, competition represents the essential condition for ensuring real

economic freedom. In what concerns the state's role, the neoliberal theories show that one of the reasons for its existence is that of being an intervenient in protecting competitive relations, in view of ensuring the liberalism of the market relations. A central pillar of neoliberalism is constituted by the role of informatic system assigned to the market.

In this mission, the market must transmit the information from the consumer to the producer and vice-versa, such as information is decentralized to the level of each individual. Thus, the evolution of each economic agent, regardless of its dimensions, depends on the consumers' orientations and on the volume of goods and services purchased by them.

The understanding of the characteristics of contemporary neoliberalism requires the previous pointing out of some of the crucial moments which marked the theoretical and methodological development of the doctrine (Zirra, 2013). The first of them, and probably the most important, is year 1938. Then was held the meeting of the Walter Lippmann Colloquium, after which in 1936 was published the Keynes's work, *The General Theory of Employment, Interest and Money* (Nica, 1997).

The ideas promoted in year 1938 were resumed in 1947. On the date of April 8<sup>th</sup>, in Mont-Pellerin was held the reunion of several Western specialists, from different fields, as a result of the initiative of three great personalities of that period, respectively Friederich A. Hayek, Ludwig von Mises and Wilhelm Röpke.

Throughout the evolution of neoliberalism, different Schools and economic theories were sketched, which were enriched as this doctrine won new adepts. German neoliberalism, or ORDO-liberalism, was promoted within the Freiburg School, created by Walter Eucken. Among the representatives are Franz Böhm, Ludwig Erhard, Wilhelm Röpke, etc. The representatives of this School were promoters of market social economy. The School of Vienna, also called the Austrian School, was another strong European centre within which neoliberalism manifested and developed. Carl Menger was the creator of this school, in the second half of the 19<sup>th</sup> century.

Together with Carl Menger, Friederich Hayek and Ludwig Mises are two renowned representatives of the Austrian current, thanks to whom intransigent liberalism subsequently became the main trait of neoliberalism. In the United States of America, the neo-classical theory was revived towards the end of the 1950's, being associated with the re-emergence of the liberal doctrine, due to the economists within the Chicago School, established by Frank Knight during the inter-war period (Hausman, [1984] 1993). Subsequently, the Chicago School was lead by Milton Friedman and Herbert Alexander Simons, among the promoters being also Hayek. As can be seen, the diversity of ideas of neoliberal orientation is great. For this reason, is necessary a clarification of the concepts of neoliberal origin, such as hereinafter we shall refer to several of the contributions, we believe, representative for the theoretical and methodological development of contemporary neoliberalism.

## **2. The main contributions of "old" neoliberalism**

Friederich Augustus von Hayek (1899-1992), eminent representative of the Modern Austrian School, studied under the coordination of Friederich von Wieser, being a colleague and protégé of Ludwig von Mises. Hayek had an immense contribution to the popularization of Austrian neoliberalism within the Anglo-Saxon countries (Klein, 1999). Hayek's first concern has as initial impulse his desire to contribute to Austria's social and economic development, which, due to the world events, had reached a

condition of accentuated poverty. In these conditions, Hayek's leaning towards the socialist orientation current, which has become very visible during that period, may be considered natural. In a second stage, Hayek started from one of the theories launched by Mises in the *Theory of Money and Credit* (1912), according to which the value of money is subjected to the theory of marginal utility, same as the value of any economic good. On this basis, Mises elaborated a theory of economic fluctuations, specific to the field of industrial production.

At the beginning of the Second World War, together with many of the Austrian School's representatives, Hayek left Vienna, becoming in 1931 leading professor of economics and statistic within the London School of Economics. From this position, criticizing the *Treatise on Money* of John Maynard Keynes, Hayek appreciated that his theoretical and methodological efforts to promote an inflation-reducing strategy were laudable, in spite of the fact that he did not agree the theories promoted by his contemporary fellow. In 1950, Hayek joined the representatives of the Chicago University, within which was functioning the so-called Committee on Social Thought. We must mention that during the starting period of the 1950's, in a context more than favourable to the development of the keynesist doctrine, neoliberalism entered a 20-year long period of „hibernation“. The moment that many consider especially important for the revival of the neoliberal paradigm is that when F. A. Hayek became the Nobel Prize winner for Economics in year 1974. In the specialty literature it is considered that one of Hayek's most important contributions to the development of the economic thought is the *Theory of economic cycles*. In this area, the object of his interest was the relation existing between the fluctuations registered in the field of the work force occupation and of the production of economic goods, on the one hand, and the evolutions in the capital structure, on the other hand (Klein, 1999).

Having as basis the theories promoted by Böhm-Bawerk in the field of capital, Hayek shows that, in fact, the economic structure of production is directly determined by the characteristics of the capital goods, with reference to their characteristics regarding the substitution ability, complementarities, durability, etc. This idea was stated by Hayek in *The Pure Theory of Capital*, published in 1941 in Chicago.

Hayek was criticizing the Theory of general balance elaborated by L. Walras and W. Pareto, saying that an economic theory formalized from the mathematical viewpoint, as in the field of natural sciences, cannot be built (Beaud & Dostaler, p. 64), especially when it is a matter of such a difficult problem as the use of the work force. During the 1920's, he was influenced by the Swedish School.

According to Hayek, the market, as self-established order, results from the interaction between the individual economic agents and from the coordination of the information circulating among the economic agents, which are at the basis of their decisions. The fundamental elements of Hayek's conception are individualism and economic order. In his opinion, any worker of the individual order is not concerned only with the relative salary he expects from the different uses of his abilities and from the resources corresponding to the relative utility of the efforts made (Hayek, [1949] 1952).

In Hayek's vision, the prices system must be seen as a mechanism for communicating information, if the understanding of the manner of its functioning is desired. Hayek considers that only freedom allows the individual to pursue his own needs and to make optimum decisions in what concerns him. The fundament of freedom, in which distinctive personalities and ambient environments can be created, is private property (Hayek, 1988).

The concerns expressed by Wilhelm Röpke (1899-1966), regarding economic cycle, the criticism of Keynesism, national and international welfare, monopoly, economic theory and social theory, etc., gathered around the idea of rejecting the concept of collectivism in all its aspects, respectively in the economic, social, political etc. fields, in the light of the ethical fundamentals of the markets established on the basis of spontaneous order (Ritenour, 1999). Röpke was a defender of the principle according to which crises are not a product of free societies, but of state interventionism in different forms. In another order of ideas, Röpke was a renowned personality of the period following the Second World War, having an important role in influencing the strategic decisions regarding Germany's economic reform, as well as in the evolution of the American economic policy of conservative orientation.

Publishing in 1936 the volume *Crises and Cycles*, Röpke stated that economic cyclicity (Ritenour, 1999) has as first factor of influence the disturbances of the „process generating long-term investments”, respectively of the “industrial fields destined for producing capital goods”. In what concerns the attitude towards the Keynesist theory, Röpke criticized the concept of full occupation, indicating that the forced preservation of the interest rates at a low level, with the propagated purpose of increasing the occupation degree, can have no other consequence than the triggering of an accelerated inflationist process.

In 1947, together with Mises and Hayek, Röpke organized an international colloquium, to which he invited experts from different fields (economics, politics, sociology, philosophy, history etc.), for the declared purpose of consolidating the notion of freedom, in its different meanings. The result of this colloquium was the establishing of the *Mont-Pellerin Society*.

Another aspect clearly indicating Röpke's opposition towards the Keynesist theory is revealed in the volume *Economics of the Free Society*, published in 1963, also in Chicago. In this book, the author says that one of the most „harmful” ideas expressed by Keynes is that according to which the „economic system is part of a supra-mathematized mechanical device”.

To the same extent, Röpke manifested against the application of the Marshall Plan for the purpose of the economic reviving of Europe, deeply affected from the economic and social point of view by the unravelling of the Second World War. We cannot avoid mentioning that Röpke was also a contestator of monopoly. Defender and fervent promoter of the free market and society, he stated that large business, created in the name of increasing the efficiency of the economic activity, represent merely another form of collectivism and signify, in essence, the transfer of the economic decision to the centralized level. „Interventionism creates more problems than it solves”, said Röpke in *Economics of the Free Society* (1963).

Many voices state that, in fact, the so-called „economic miracle of Germany” after the war is due to Röpke's influence on Ludwig Erhard (Ritenour, 1999). Röpke himself affirmed that the evolution of the German economy was determined by the creation of specific infrastructure elements, of economic, social, political, administrative, legislative etc. nature, which ensured and, at the same time, favoured the harmonious development of market economy. In 1948, the monetary reform was performed in Germany, by means of the exceptional contribution of Ludwig Erhard.

### **3. What brings the "new" neoliberalism in economic theory?**

Exceptional journalist and renowned intellectual of last century, Henry Hazlitt (1894-1993) stood out in the evolution of the neoliberal economic thought (Tucker, 1999)

both by means of his great contribution to the popularization of Ludwig von Mises's work, and through his opinions regarding the theory of economic cycles. Subsequently, in the same spirit, Hazlitt manifested against what he called the „National Industrial Recovery Administration”, militating against all elements of keynesist nature, which had the destiny to give an impulse to the movement towards the health of the American national economy, strongly affected by crisis. Hazlitt's best known work, which made him very popular including among the economics passionate scholars of nowadays, is *Economics in One Lesson*, published in 1946 in New York. The ideas promoted by Hazlitt in this book and completely of neoliberal nature, the author being significantly influenced by the writings of his „mentor”, Ludwig von Mises.

In the long tradition of the Austrian School, Murray Newton Rothbard (1926-1995) enjoys a privileged position, for three reasons (Hoppe, 1999). First of all, he is considered the last representative of the mainstream current represented by the “old” Austrian School. Secondly, together with Mises, Rothbard is considered one of the most „comprehensive systems' creators”, as illustrated by his work *Man, Economy, and State: A Treatise on Economic Principles*, published in year 1962. Thirdly, Rothbard is considered „the last and most systematic representative of the Austrian political economics”. These ideas of Rothbard are stated in his work *Ethics of Liberty*, elaborated in 1982.

In what concerns Rothbard's contributions to the development of the economic theory, we will list, in a synthesized manner, several of them hereinafter. For start, we mention that one of the most important theories launched by Rothbard regards the concept of marginal utility. With respect to the theory of marginal utility, he brought valuable conceptual clarifications in the field. He said that any attempt of cardinal measurement of utility is senseless.

With respect to the concept of welfare economy, Rothbard ([1962] 1993) had a radical approach, reconstructing the entire theory on the basis of two concepts: individual freedom in what concerns the decisions targeting the assurance of the daily life and of human development (individualist self-ownership); individual preferences manifested or expressed within the market (demonstrated preference). The Chicago School was consolidated and stood out at the international level thanks to Milton Friedman's personality. The representatives of this school were against the increase of the state's role in economy, idea supported by neoliberals, even if it preponderantly referred to the protection of the free manifestation of competitive relations (Braunstein & Pepin, [1998] 2000). Friedman claimed the importance of the *market economy as support of the freedom of choice and of consumer sovereignty*. In the American neoliberalism framework different theories emerged, such as, for instance, the *Theory of the supply economy* and the *Theory of rational expectations*. Those who promoted the *Theory of the supply economy* were Arthur Laffer, Norman Ture, Martin Feldstein and Jude Winnicki. This theory highlights the negative effects that the controlling doctrine has on the American economy, which materialized in the discouragement of labour and investments, in the inhibition of private initiative, with serious results regarding the evolution of labour productivity (Sută–Selejan , 1997). The *Theory of rational expectations* separated from the monetarism of neoliberal nature. The promoter of this theory was John Fraser Muth, who launched the concept in an article published in 1961, with reference to the insurance market and the economic goods' market. The idea was subsequently taken over and developed by other economists, such as, for example, Robert Emerson Lucas, Thomas John

Sargent or Neil Wallace. They mainly referred to the fact that control is not capable to ensure development, prosperity and economic stability for large time horizons. Those who continued the American neoliberalism development, Mincer, Schultz, Becker and Stiegler, founded the *Theory of the human capital*. According to this theory, no wealth can be created without the contribution of human resources, which are considered a form of capital which can be administered after the same rules as the physical (material) resources.

As can be seen, the different aspects of neoliberalism show that there is no full coherence of the representative ideas for this doctrine. The specialty literature (Mudge, 2008) indicated that the moment when care neoliberalism was „officially internationalized” is year 1983, when in London was established the International Democratic Union. Among the renowned founding members of this Union, we mention Margaret Thatcher, George H. W. Bush, Jaques Chirac and Helmut Kohl.

#### **4. In conclusion**

In the current economic literature it is considered that globalization represents the peak of the neoliberal doctrine. This globalization of the economic policy is not entirely new. In 1920, the promoters of „economic liberalism” tried to reinstate the ambitions of the self-adjustment of the economic system, by eliminating the interventionist policies, which were interfering with the markets’ freedom. The negative consequences of this vision occurred in the immediately following period (1930-1940) and illustrated that the full liberalization of the market system is impossible.

In the 1960’s, the neoliberal doctrine diversified, new theories emerging (the *Theory of the rational expectations* and the *Theory of the supply economy*). Then, starting with the 1970’s, during the period of accentuation of the system crisis of the capitalist economy, several currents of „neoliberal orientation” emerged (the monetarist doctrine, the ultra-liberal doctrine, the libertarian doctrine), which started to offer both an explanation for the occurrence of the crisis, and a methodology for overcoming it. With the collapse of the Soviet system at the end of the 1980’s, neoliberalism occupied the centre of the political stage. The basic package of the policies promoted at present contains, in a first stage, the achievement of macro-economic stabilization, followed by the second stage of adjusting the market, in order for it to work efficiently. At present, it is considered that if the equitable development will continue to be left to the self-adjusting markets, the problem of inequity, of the occupation of the work force and of poverty, which currently manifest, will become more dramatic in the new millennium.

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***SUB-SECTION: BUSINESS ADMINISTRATION***



# **SOCIAL CAPITAL FRAMEWORK AND ITS INFLUENCE ON THE ENTREPRENEURIAL ACTIVITY**

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**Abstract:** *The aim of this article is to understand the theoretical framework of the social capital concept, based on different approaches identified in the literature and highlight the direct influence social capital has on the entrepreneurial personality characteristics of individuals and organizations. The objectives of the paper focus first on conceptualizing the notion of social capital, by acknowledging the social capital structure and components, the sources of social capital and its role in building social economy; further on, the article explores the influence of social capital in the creation of innovation and economic growth, its dimensions in the entrepreneurial process and the definition of the instruments of measurement, including indicators of trust-generalized and institutional, number of social networks, associational activities-passive and active membership and civic norms. The paper gathers some of the outcomes of different researches conducted in the literature with respect to the positive relationship between social capital dimensions and entrepreneurship, through attracting the right potential of human capital and the required level of financial capital, reducing the transaction costs, identifying new market opportunities and leveraging the social networks, transfer and knowledge overflow and information channels, enabling the launch and the survival of business venture and help gain competitive advantage that would ensure sustainability and success. The case studies referenced in this article use various approaches of highlighting the social capital as a key enabler and not necessarily a generator of entrepreneurial activity, by analyzing the likelihood to launch new ventures based on the interactions with key partners and exchange of information, the sustainability and success of a start up or push/pull factors that determine an entrepreneur to enter the new ventures environment. The article is concluded by a high level introspection on how social capital is created in large corporations, what are the dimensions and the structure of this new "must have" capital form.*

**Keywords:** *Social capital; entrepreneurship; social networks; innovation; corporation*

**JEL classification:** *M10; M13; M14; M19.*

## **General Introduction**

In the context of a global, knowledge driven economy, the competitive advantage for becoming the leader in the organization, company or industry is not provided anymore by the level of physical capital possessed, but it is determined by strategic elements such as the individuals' knowledge; the goodwill and intellectual property and the number of social networks (Lakshmanan, 1994; Castells, 1998; Miller, 2005; Westlund, 2006). The mixture of these key ingredients becomes the recipe for success in the acceptance of Smilor and Wakelin (1990) who refer to it as the "smart infrastructure"; this connects the human resources and market potential, technology, capital and know how into one single element, similarly as pieces of a puzzle.

The paper is focused exclusively on discovering the first and the third element of this "smart infrastructure", namely the concept of individual knowledge- in this context how this can be shared and transferred through information channel and the one of

social networks and how can these be leveraged, in order to accelerate all the right components that enable an organization, either a new start up or a mature firm to perform entrepreneurial activities.

Since the framework of social capital is the one that covers both elements- the knowledge and information transfer and overflow and the social networks, I will begin by conceptualizing the notion of social capital, based on how this is defined in the literature, by identifying its structure and dimensions and its role in building social economy; further on, the article explores the influence of social capital in the creation of innovation and economic growth, its dimensions in the entrepreneurial process and the definition of key boosters, such as number of social networks, trust-generalized and institutional, associational activities-passive and active membership and civic norms. In order to highlight how social capital is given birth among the members of a community, the paper includes the outcomes of two researches conducted in the literature with respect to the positive relationship between social capital dimensions and entrepreneurship, through engaging the right potential of human capital, identifying new market opportunities and leveraging the social networks, transfer of knowledge overflow and information channel. The second part of the paper represents a high level introspection on how social capital is included in corporations' strategy, strongly connected with the three dimensions of social capital: structural, relational and cognitive. The last part of the paper covers the conclusions and the personal beliefs of the research conducted.

## **Methodology**

The methodology applied for writing the current paper is the literature review, by extracting some of the available studies and information that cover the influence of social capital on the entrepreneurial activity and the dimensions of social capital in organizations. As I am trying to put in place the general framework for social capital and its impacts on the entrepreneurship in general, in order to identify the most relevant articles, I looked for the papers having in the subject name key terms related to the topic of my paper, such as "entrepreneurship" "new start ups", "innovation", "new business", all of them in correlation with the social capital concept. Even if references for social capital framework include writings from the 90's, most of the studies covering the roles of social capital in organizations and its influence on the entrepreneurship were conducted after year 2000, reason for which I chose to include outcomes of two studies performed in 2008, consequently 2011, that I found relevant for the topic selected. The general scope of the paper is to understand the background of social capital concept, in relationship with all the key terms that define the entrepreneurship starting with the definition of the term in the acceptance of important scholars in the field, such as Coleman and Putnam, understanding the entrepreneurial process and ending with concrete results of two studies conducted in business private environment and academic field. Even if the two models analyzed are targeting a different audience and materialize into different situational approaches, the outcome leads eventually to a similar conclusion, positioning social capital as an accelerator of innovation and new opportunities, but also as a connector among existent and potential entrepreneurs.

## **The Influence of Social Capital and its Components in the Entrepreneurial Activity**

In order to understand the correlation between the social capital and entrepreneurship, one key stage is to frame the conditions that the later one addresses. In the modern approach (Shane 2004) entrepreneurship is related to recognizing windows of opportunities within or outside the firm, market or industry through innovation and growth, by leveraging these opportunities to a large scale in order to satisfy people's unmet needs, by attracting the right human and financial resources and by partnering with strategic stakeholders, assuming in the same time a certain level of risks and uncertainty. In order to be able to identify the areas that an entrepreneur can penetrate, one of the strategies he or she needs to implement is to always remain externally connected with stakeholders, key influencers, actual or desired partners. Considering Putnam's concepts of bonding and bridging social capital (Putnam, 2000), an entrepreneur can actually seize business opportunities by direct or indirect networking with partners or clients activating in the same business environment or by interacting with individuals or entities belonging to a different field or market. However in order to be successful, one needs to be inclusive and remain linked to both communities, by encouraging the interpersonal connections, in order to create wealth for the company and for the society. In one of his lectures, Putnam who previously acknowledged that "Social networks have value...social contacts affect the productivity of individuals and groups" (Putnam, 2000), reiterates this idea in one of the lectures held at Manchester Metropolitan University. His speech contains one real business example where Business School in Chicago computed the dollar value of the address book for the average America, giving this way to the social network a financial dimension. (Putnam, 2007). In the context of a new start up, the networks and the social relations, as well as the existence of string ties with actors playing in the business can ensure the attraction of funds from venture capitalists. (Cable and Shane, 1997).

Another component of social capital, besides the social networking that brings added value in the entrepreneurial activity is related to the information channels and its broadcast in a free cost environment. A similar dimension is recognized by Coleman who refers in his study to those actors interested to acquire some degree of knowledge in a certain domain, without being willing to pay for the information, reason for which they make use of the social relations, so that social capital becomes a public good. (Coleman, 1994) Similarly, the opportunities seekers can collect information from different communities they belong, from associational activities they are involved in, that eventually might materialize into serious business propositions. The process of decision making becomes dependent on the information collected from suppliers, distributors, clients and even competitors (Bruderl and Preisendorfer, 1998; Bosma et al., 2004). Therefore in order to take advantage of this information, the providing sources of information need to be reliable; this way the presence of trust, as component of social capital becomes mandatory. Considering the classification of trust provided by Dakhli and de Clercq (2004), the trust can be of two types: generalized and institutionalized. This differentiation becomes extremely important when understanding that an entrepreneurial activity is not a standalone activity, but this is performed in a highly complex environment, ruled by governmental laws and business policies. In order to be successful, an entrepreneurial organization must embrace both the general trust, invested and

expected at individual level and institutional trust, invested and expected from the relationship with the other organizations and institutions.

Based on the above considerations, social capital remains a very attractive intangible asset (Adler & Kwon, 2002) as it reduces the transaction costs between the individuals and entities, the negotiation costs, the information and knowledge cost and the ones of the decision (Maskell, 2001; Landry et al., 2002).

By analyzing the current literature, we can identify a variety of different studies conducted in the industry that acknowledge the significant economical value that social capital has. This is highly contributing to the entrepreneurial process through its components, such as social contacts, social networks, trust, associational activities or civic norms. These studies use various approaches of highlighting the correlation between social capital and entrepreneurial activity, by analyzing the likelihood to launch new ventures based on the interactions with key partners and exchange of information, the sustainability and success of a start up or push/pull factors that determine an entrepreneur to enter the new ventures environment. For this article I chose two of these focused studies to reflect the strong relationship between social capital exploit and the success entrepreneurial outcome. However there are more similar researches conducted in different regions, business sectors, involving diverse actors, while centralizing them will make the object of future article. One example of these case studies is the Emerging Entrepreneurship Workshop conducted by Stanford University (Audretsch, Aldridge and Sanders, 2011), focused on building connections between investors, academicians and potential employees that would be leveraged at a later stage as innovation accelerators in creating a start up in the medical area. The study is based on a parallel between groups that had previous connections before their interaction at the workshop and the ones that met for the first time in the meeting facilitated by the University. The study is conducted on a period of three years after organizing the event, analyzing the baseline level of social capital and how this acts as an enabler for the interaction among potential partners that share and exchange information for creating new ventures. Based on the survey conducted at Stanford, three years after the conference, the outcome reveals an increase with thirty percent of the number of startups created by attendees of the conference. The results of the survey rely on a response rate of 46% of the individuals with prior connections and relations in the participating audience, The figures published by the University demonstrates the hypothesis according to which the social capital empowers the actors in materializing innovative ideas and accept challenges and uncertainty, after sharing opinions and asking for guidance from trusted counselors and advisors. Another important achievement of this study is the series of qualitative feedbacks collected from the participants to the conference that acknowledge the importance of interacting with actors from the same business area: "I've built more relationships as a results of the Emerging Entrepreneurship Conference than through other means by at least an order of magnitude" (Audretsch, Aldridge and Sanders, 2011:161). Such statements provide important reason to believe for the future sessions of this conference, encouraging current or potential entrepreneurs to join and benefit of their ratio of social capital. Professor Nalan Yetin conducted a research on 304 female entrepreneurs in Mersin, Turkey with the objective of understanding the degree of influence of social capital and sociocultural characteristics on the business success of the respondents (Yetin 2008). She references the push and pull factors in order to clearly differentiate between the two contexts that determine the females to start up their own ventures.

In her study, the professor considers also the demographic factors such as the age and social capital dimensions, such as the capability to build strong, weak or mixed ties in order to succeed. Professor Yetin introduces as input variables the status of migrant versus non migrant and the social class the females belong to, in order to understand the interdependency between the high usage level of the interpersonal relations and the entrepreneurial personality characteristics. Being a citizen of Mersin, or on the contrary, being relocated from outside the city was closely connected to the factors that determined their choice of becoming an entrepreneur and also contributed significantly to their ability of using social networks to their best advantage. Based on the outcome revealed by the research, the migrant women, belonging to the lower social class start up small businesses, in order to provide material support to their families, overcome difficult business conditions or gender discrimination (push factors). The same research reveal that non-migrant female, members of the middle and upper class use these opportunities to demonstrate their financial independence and autonomy in front of the other family members, to reach a superior level condition or establish an equilibrium between the personal and professional life (pull factors). Closely connected to the females' social status and consequently to the level of roadblocks to be prevailed, is also the usage of the social ties, of the strong ones or of the weak ones. The migrant women tend to maintain strong relationship with their family, relatives and the communities they belong to in order to entrust in their full support in achieving the desired goals, registering a high level of social capital. On the contrary, the non migrant female entrepreneurs prove a lower level of social capital, as they are not focused anymore on bonding or bridging new relations, but they are concentrated more on risk taking and reach a certain level of self-esteem.

These are two of the diverse spectrum of studies that were initiated on analyzing the relationship between social capital under different forms and components and entrepreneurial activity, with particular emphasis on the new ventures and start ups. However the entrepreneurial characteristics are not exclusively related the small-medium start ups, but also to large corporations. Considering Shane's perspective on the entrepreneurship (2004), the main characteristics of this activity which include recognizing innovation solution for unsolved problems or unsatisfied needs within or outside the firm, markets or industry, leveraging these opportunities to a large scale and assuming unknown risks and uncertainties, are applicable also in large corporations and multinational companies. Creating new business model, launching subsidiaries in emerging markets, simplify or eliminate existing processes by innovation and benchmarking are just few of the approaches that a corporation can undertake in order to classify itself as an entrepreneurial organization.

The following section of the article will approach how social capital is perceived in the large corporations, its structure and dimensions in strong connection with the entrepreneurial activity of these organizations.

### **High Level Introspection of Social Capital In Corporation**

Nowadays, the corporations acknowledge the difference between knowledge capital, human capital and social capital and the importance of each of these three dimensions has on the overall performance of the employees, materialized in the level of innovation and entrepreneurial spirit of each individual. If the human capital and knowledge capital have been accepted by now as main success drivers for the entrepreneurship and included in the speciality literature as prompts for innovation

and economic growth (Lucas, 1988; Romer, 1986; 1990), the previous case studies presented in this article are designed to bring the social capital in the spotlight, as main competitive advantage enabler and innovation generator for new ventures and start ups, wherever the level of human capital and knowledge capital are comparable.

Similarly as in the new start ups, the social capital created, maintained, pursued and implemented in a corporation can be defined as an intangible form of capital, resulted from the cumulus of the networks that are created within or outside the company, based on a relationship of trust and affiliation to a certain set of shared norms, values and principles which are generated collectively, but can be used individually in order to innovate, grow, add value to the overall entrepreneurial activity of a corporation. Social capital is rooted in the strong and weak ties, internal and external connections created at individual level by each employee in the organization, at corporation level through the interactions of the headquarters with different divisions and at company level, through the interaction with stakeholders and shareholders. Given the global dimension of a corporation, one special characteristic is the possibility to create social capital outside the boundaries of the company's headquarters, in each market and location where a subsidiary is present or the services/ products of the company are available.

Related to the above definition and considering some of the highlights existent in the literature (Hazelton& Kennan, 2000; Nahapiet& Ghoshal, 1998; Tsai& Ghoshal,1998), there are three dimensions social capital can take within an organization: structural, relational and cognitive. The structural dimension defines the actors' capability to build powerful or vulnerable bridges with the other individuals within a common system of reference, but it also refers to the individual self equity. Hazelton and Kennan (2000) add four key enablers to the structural dimension: availability of the network channels, the timing and the fast reaction implementation of the information that is being shared, the frame of reference indicating the availability and accessibility of resources and leveraging the information and resources for additional objectives and goals than the ones initially proposed. Considering the corporation's presence in different markets, countries and even continents, the variety of social capital –which is dependent on the number of employees and teams within the organization is greater than in the new start ups; similarly the number of potential networks and communities that can be created is significantly higher. The size of the social capital is also determined by the external ties that are created outside a corporation; therefore when considering the number of strategic stakeholders that a corporation can partner with, including the suppliers, distributors, clients, consumers and even competitors, the number of social relations and networks given birth from these interactions is significantly greater. Also from the timing perspective, the creation of these social relations is encouraged to take place as soon as an individual is joining the company, as soon as a new team is being created or right after a partnership is being signed, as this is frequently included in the corporation's set of principles, values and policies. Moreover, the resources that enable the creation of social capital are available on the spot, encouraging the actors to embrace them immediately, but also pass them over when transferring a certain activity or area of knowledge to new members in the company or to new partners in the external relations.

The relational dimension focuses on the type of connections that are established within the individuals and the level of trust that is created, as well as the entire set of

other beliefs that serve as a connector between the members of the community they belong. The set of beliefs refer to the identification-the perception of the actors related to how connected they feel with the others and the degree of social system closure and also to the implementation of civic norms which trigger sanction for those members, part of the system of social capital which don't respect the common values anymore (Hazelton and Kennan 2000). The relational dimension is very well reflected by Yoshio Maruta, Kao's chairman: "if anything goes wrong in one department, those in the other parts of the organization should... help without being asked." (Ghoshal& Barlett, 1995), highlighting this way the high level of trust that is expected and unquestioned by the leader of an organization. Actually trust is the milestone based on which the success of any company is built: it's the trust invested in each employee that assumes the ownership of their work, the trust in the leadership of the company to manage successfully the entire organization, the trust in the stakeholders which will play as advocate for the company's value, the trust of the investors that will provide ongoing support for the company's activity. The affiliation to the same set of norms and values is also important both for the actors within the company and the partners from outside, as this is also contributing to the creation of social capital. The cognitive or the content dimension defines the shared level of information and knowledge leveraged within one or several groups. According to the same Hazelton and Kennan (2000), from the content dimension, there are four sources that create social capital: information exchange, problem identification, behaviour regulation and conflict management. Given the large number of networks and communities built and the volume of information flow within a corporation, the cognitive dimension can reach high limits.

## **Conclusion**

Social capital is a valuable key enabler for entrepreneurship, regardless it's created as a base for the newly start-ups or within the premises of a corporation. The objective of the paper was to introduce the theoretical concept into the entrepreneurial framework and compare the outcomes of previous researches in the field, in order to highlight its positive influence on innovation, transaction costs between the individuals and entities, the negotiation costs, the information and knowledge cost and the ones of making decisions (Maskell, 2001; Landry et al., 2002). Additionally, starting from the idea that the corporations are also entrepreneurial organizations and the concept of social capital is also present at this level, I tried to identify the structure and dimensions, based on the theoretical concepts available in the literature. The review of different studies and the interactions I had with the entrepreneurial environment determine me to believe that nowadays there is particular focus of the companies on the social dimension of their activities, especially in the large corporations, when it comes to the level of social capital created within and outside of their premises. Regardless if we are considering social networks, trust, shared norms, shared values or principles, all these components are being perceived and generally recognized as significant differentiators for the organization's success and long term sustainability and this is also highlighted by the two case studies presented in the paper. In the context of entrepreneurship, whenever considering newly starts ups or mature organizations that are still focusing on identifying the right window of opportunity, I believe that innovation is the key. How to boost the sources of innovation, such that the breakthrough on the market is imminent represents a challenge that almost every

leader is facing. I strongly consider that social capital is one factor that can be leveraged in order to address this strategy and build a culture of innovation, such that each individual in the organization proposes an idea for simplification or digitization, considering in the same time the internal rules and policies to be respected. This behaviour can only be encouraged, by inspiring trust, confidence in the leadership, organization and the company's values and principles, but also by the care for the community where the company is activating. Another key component that is positively influencing the culture of innovation is the free flow of information and this can only be achieved through networking, bridging and bonding interactions. The networking can be enabled at different levels: interactions among the employees, interactions with different peer companies, part of the same group, interactions with the community, interactions with suppliers, customers, but in the end the outcome can only be a positive one- having access to free information that eventually might translate into innovative ideas, fast decision making, on spot implementation and increase in the customers' satisfaction.

However how much social capital the multinational companies actually create, compared to what exactly they claim to and how this level of social capital influences the overall performance of the organization represent the object of future researches and articles.

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## **SOCIAL RESPONSIBILITY OF ROMANIAN COMPANIES: CONTRIBUTION TO A “GOOD SOCIETY” OR EXPECTED BUSINESS STRATEGY?**

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**Abstract:** *Starting with J. K. Galbraith who conceptualized what “good society” means and how it can be achieved, a long series of both theoretical and practical concerns has emerged. One way of implementing it is companies’ social responsibility. Companies are parts of the society, involved in social, cultural and educational field, contributing to economic and social development by creating jobs, producing goods, providing incomes and resources for public communities, innovations and general progress. Moreover, the companies’ social responsible actions cannot exclude the concern for major problems of the society, e.g. unemployment and social exclusion, equal chances or environmental issues. The social responsible companies involve themselves more and more in sponsorship and humanitarian mecenatum. At the same time, on the theoretical side, last decades testified of an effervescence of the researches on practices related to the concept of corporate social responsibility. Whilst so far corporate social responsibility is mainly promoted by a number of large companies, it is relevant in all types of companies and in all sectors of activity, from SMEs to multinational companies. A number of companies with good social and environmental records indicate that these activities can induce better performance and more profit. The paper investigates various issues concerning Romanian companies’ CSR projects, attempting to reveal to what extent these actions really contribute to a “good society” or they are just business strategies to attract customers and make more profit. In its first part we introduce the subjects and briefly review the literature and main concepts, while in the second part we present main facts and figures related to CSR in Romania, along with the main types of companies’ involvement in social and humanitarian area. We analyse the differences between behaviour of large companies versus small and medium sized companies, and also the most adequate forms of intervention (financially and legally) to ensure maximum efficacy and visibility of CSR actions. Finally we conclude on the importance of CSR within society but also on the risk that it could be converted in a business strategy or marketing tool, without any social impact.*

**Keywords:** *corporate social responsibility, good society, Romanian companies, business strategy*

**JEL classification:** *M14; A13; L21.*

## **1. Introduction. Corporate social responsibility for a “good society”**

John Kenneth Galbraith defined the essence of the good society as follows: "It is that every member, regardless of gender, race or ethnic origin, should have access to a rewarding life. Allowance there must be for undoubted differences in aspiration and qualification. Individuals differ in physical and mental facility, commitment and purpose, and from these differences come differences in achievement and in economic reward. [...] No one, from accident of birth or economic circumstance, may be denied these things; if they are not available from parent or family, society must provide effective forms of care and guidance" (Galbraith, 1996). Undoubtedly, the desire of a better society exalted minds of tens of philosophers, sociologists or economists, but never like in the last hundred years the world was never more far away, and, at the same time, closer to this ideal. What is, however, a better society? The utilitarians define better society as one that can best meet the needs of as many members of society; others see it as the organization that provides and ensures an equality of chances among citizens, while left-wing militants imagine better society as one that ensures a fair distribution of results among citizens. Amartya Sen suggests an alternative approach, recalling that certain modes of society are essential for a better human life: meeting the physical needs and physical security, taking decisions on an informed basis, the existence and exercise of civil and political rights (Sen, 1999).

Could be the modern enterprise an agent of a better society? It is possible that its fundamental purpose: to generate profit, to work in line with social concerns?

The company is a part of whole society, acting as an active actor in social, cultural and educational field. The company contributes to economical- social development by creating jobs, products/goods, values, incomes, resources for public communities, inventions and widespread of technical progress. In the same time, the company's social responsible action cannot exclude the concern for major problems of the society as unemployment and social exclusion, equal chances or environmental issues. The civic company is concerned by issues related to ethics, to conduct rules promoted by the community of the entrepreneurs, in order to achieve certain goals.

## **2. The concept of corporate social responsibility and its meanings**

As many other modern concepts and concerns in the economic theory and practice, also in the case of corporate social responsibility (CSR) the origin has to be searched long time ago. Adam Smith, before writing his master piece *The Wealth of Nations* (1776), wrote *The Theory of Moral Sentiments* (1759), providing the ethical, philosophical and methodological basis for his later works. Later, Adam Smith argued how, paradoxically, the individual selfish behaviour drives to collective interest achievement, by the natural intervention of the invisible hand of the market, of course in a perfect competition environment: "... In spite of their natural selfishness and rapacity, though they mean only their own convenience, though the sole end which they propose .... They are led by an invisible hand to make nearly the same distribution of the necessaries of life..." (Smith, 1904).

However, the silence covered all moral, ethical and social responsibility issues of the companies for almost two centuries. In the early of last century, Oliver Sheldon (1923) encouraged management to promote ethical standards and justice in society through an efficient resource usage and only in 1953, Howard Bower, nicknamed 'the father' of the social responsibility of the company, defined corporate social

responsibility as: “the obligations of businessmen to pursue those policies, to make those decisions or to follow those directions that are agreed in term of values and goals by our society” (Bowen, 1953).

In the last decades, we assist at an effervescence of the concept and practices related to the concept of CSR, all over the world. Keith Davis and Robert Blomstrom (1975) define the concept thus: “Social responsibility is the obligation of decision makers to act in order to protect and enhance the well-being of the society as a whole, besides the necessity to protect their own interests” and Joseph McGuire (1963, p. 74) stated: “the idea of corporate social responsibility assumes that a corporations do not have only economic and legal obligations, but also responsibilities toward the community where it activates”.

Overall, we can say that most definitions of CSR describe it as an integration of social, public, human and environmental concerns in their business activity and in their interaction with the stakeholders on a voluntary basis. Being socially responsible means not only fulfilling legal expectations, but also going beyond compliance and investing in human capital, the environment etc., investment which is assumed as a driven factor of the company’s competitiveness. CSR is a concept referring to the contribution that companies should have to the modern society development. The wide variety of theories and approaches to CSR can lead to confusion, especially when many authors try to broader the content to these theories, diluting their meanings. In a systematization undertaking, Secchi (2007, pp. 347-373) recognizes three categories of these: the utilitarian theory - addressing social costs issues and functionalism, 2) The managerial theory - Corporate Social Performance, Social accountability, auditing and reporting, social responsibility for multinationals, and 3) the relational theory dealing with Business and Society Stakeholder Approach, global Corporate Citizenship and Social Contract theory. From another perspective, Garriga and Mele find that CSR’s theories cover four distinct areas: instrumental, political, integrative and, finally, ethical theories. For the latter they associate those actions that, in their moral and correctness, lead to implementing the ideal of a better society (Garriga & Mele, 2004) and (Ismail, 2009, pp. 308-318). Whilst so far CSR is mainly promoted by a number of large or multinational companies, it is relevant in all types of companies and in all sectors of activity, from SMEs to multinational companies (MNCs). For many companies involved in these activities, the economic impact of corporate social responsibility can be broken down into direct and indirect effects. Positive direct results may derive from a better working environment, which leads to a better motivated and productive employees and a rational use of natural resources. Indirect effects result from the growing attention of consumers and investors, which will increase their opportunities on the markets. Inversely, we notice negative impact on a company’s reputation due to criticism of business practices, affecting the core assets of a company, such as its brands and image.

CSR has two different dimensions: the internal dimension and the external one. About the internal one, socially responsible practices primarily involve employees and relate to issues such as investing in human capital, health and safety, while environmentally responsible practices relate mainly to the management of natural resources used in the production, reconciling social development with improved competitiveness. The external dimension involves also the business partners and suppliers, customers, public authorities and NGOs representing local communities, as well as the environment. Moreover, the globalization has encouraged the

development of "global governance": the development of voluntary CSR practices can be seen as contributing to this (Commission of the European Communities, 2001).

At this point, we cannot ignore that CSR could be, in the absence of a real commitment solving social and ecologic problems, just as an empty box. Milton Friedman said that "The discussions of the "social responsibilities of business" are notable for their analytical looseness and lack of rigor. What does it mean to say that "business" has responsibilities? Only people can have responsibilities. A corporation is an artificial person and in this sense may have artificial responsibilities, but "business" as a whole cannot be said to have responsibilities, even in this vague sense" (Friedman, 1970). Thus, we could differentiate the critics of CSR into two main trends: first, the most active, coming from the defenders of free market principles, taking arguments of Milton Friedman - the only social responsibility of business is to increase profits, accusing world business leaders have abandoned the principle of efficiency in favour of so-called "political correctness". Recently, some critics come from the leftist area of (American) democracy. Thus, Robert Reich denounces CSR as a dangerous diversion that undermines democracy, considering that companies "can not be socially responsible, or at least to a significant extent," and CSR activists should insist to make governments primarily responsible in setting standards and norms, in order to avoid companies to act against the interest of society (Reich, 2008). Moreover, crediting firms with socially responsible actions when they actually seek economic effects thereof, is dangerous, because extends this category of CSR over all firms actions in profit seeking and competition. For Timothy M. Devinney (2009) "the notion of a socially responsible corporation is potentially an oxymoron because of the naturally conflicted nature of the corporation".

Without getting into a controversial debate on CSR, some issues remain: whether firms that are involved in these actions are/become more profitable, if CSR's actions should not be understood as a form of "smart management", and, the last, but not the least, we have to accept that is unlikely companies to do things against their self-interest. To fundamental reject these actions is as we show to the companies they don't need act responsibly. It might cause them to under-invest in these opportunities, and to focus excessively on short-term profit (The Economist, 2007).

### **3. Corporate social responsibility in Romania**

In Romania, the concept of social responsibility has appeared in Romania after 1990 when many NGOs - associations and foundations were set up with the help of international public or private institutions, especially with a humanitarian role, for helping some disadvantaged categories: children, elder people etc. Following the social initiatives, the concept of CSR was introduced by big multinational companies entered in Romania and pursuing and promoting global projects and programmes, e.g. Coca-Cola, Pepsi-Cola, Philip Morris etc., the majority of them joining the American-Romanian Chamber of Commerce. After 2000, many other business companies, both large and SMEs, started to involve in actions of social responsibility, especially involving environmental and social issues.

According to a 2007 report regarding CSR and competitiveness regarding the situation of CSR in Romania, the corporate responsibility, far from being ignored or viewed with apathy, is simply expected in some sectors of Romanian business (CCIR, et al., 2007). The standard CSR terminology and language is not universally

understood, but fair pricing, health and safety, good working conditions, community involvement and environmental protection are all high on the list of public/consumer concerns. At the middle of 2000, Romania, as many Central and Eastern countries come to terms with rapid economic growth and that was an opportunity for businesses to stand up to the challenge and help fill the social vacuum left by the demise of Communism. By doing this, businesses can help to guarantee the stability of Romanian society. Many businesses operating in Romania were taking their responsibilities seriously, but many more preferred the easy route: using PR to artificially alter public perception.

In Romania, the first significant activities stimulating companies to be part in social activities was TOP Corporate Philanthropist, by granting diplomas, awards, public recognition to companies involved in social projects. Thus, in 2006, were mentioned names as BRD - Groupe Société Générale, Ductil SA, IMPACT SA, DotCommerce Romania (Forumul Donatorilor din Romania/Romanian Donors Forum, 2012). In the following year (2007), the corporate donations increased, as Romania was ranked second in the CEE region, after the Czech Republic. Although the amounts were relatively modest, the increase was significant: from nearly 3 billion in 2006 to about 8 billion in 2007 (Forumul Donatorilor din Romania/Romanian Donors Forum, 2012). The trend has continued, in 2008, top 10 among donors in Romania have invested over 12 million euros in social responsibility projects and top 10 corporate foundations have funded civil society with over 6.4 million Euro. Petrom SA was considered the most generous large companies and Vodafone Romania Foundation was named winner in corporate foundations sections (Euractiv, 2009). In time, the CSR budgets have constantly increased in the last years, as it can be seen in Table 1.

According to a research conducted by CSR Media, Romanian companies have invested in CSR projects about 16 million in 2011, and over 12 million in 2012 (CSRmedia, 2013). From this, approximately 16 million allocated to Social Responsibility projects in 2011, almost 11.6 million euros were invested by the Top 10 Corporate companies in Romania. The amount represents about 1% of their declared net profit. Most CSR investments in 2011 were made by companies operating in the oil, telecommunications and banking sectors; the largest budget of CSR, around 4.2 million in 2011, come, as expected, from the Petrom – the largest oil and gas producer in South Eastern Europe. According to the representatives of this company, between 2007 and 2012, Petrom has invested over 30 million euros in social responsibility projects, the most famous being "Andrei's Country" (Țara lui Andrei) (Craciun, 2013), "... a great community oriented to solutions that generate long-term value. We encourage both individual initiatives and those from organizations that create economic value for the community, but addressing social problems. We strongly believe encouraging entrepreneurship integrated with a community approach, we are able to make Romania a better country ... " (Forbes Romania, Craciun M., 2012).

**Table 1: CSR budgets in Romanian selected companies**

Company	CSR budget (in thousand EUR)						
	2004	2005	2006	2007	2008	2009	2010
A&D Pharma	300	500	550	670	350	400	470
Avon Romania	n.a.	n.a.	n.a.	242	338	254	n.a.
Banca Transilvania	n.a.	400	550	480	n.a.	n.a.	n.a.
BCR	n.a.	2000	2000	2000	2000	2000	n.a.
Carpatcement Holding	300	300	300	300	300	300	300
Coca Cola	300	300	300	1000	1000	1000	n.a.
Cosmote	n.a.	n.a.	n.a.	n.a.	n.a.	120	100
GlaxoSmithKline (GSK) Romania	n.a.	400	232	230	150	330	413
Holcim Romania	n.a.	n.a.	n.a.	500	600	250	250
Petrom Romania	n.a.	n.a.	2600	5000	n.a.	n.a.	n.a.
Romstal	n.a.	n.a.	n.a.	110	200	220	n.a.
Transgaz	n.a.	n.a.	n.a.	320	964	743	2000
Tuborg Romania (URBB)	n.a.	300	n.a.	70	760	730	n.a.
Unicredit Tiriac	145	125	500	500	1000	600	650

Source: <http://www.responsabilitatesociala.ro/companii.html>

In aggregate terms, most of the amounts invested in the last 6-7 years were sponsorship, and only a small part in donations. The explanation is that Romanian legal framework, do not stimulating the donations: the procedure is complicated involving a donation act through notary offices and around 1%-2% taxes and notary fees. On the other hand, the sponsorship can be immediately granted, and their amount can reach up to 20% from the income tax, but not exceeding 0,3% from annual cumulated turnover. In the 90s, Romanian companies made donations in small amounts, especially for social causes, based on emotional impulse not on a policy basis, such as: the desire to help other people (39%), humanitarian reasons (17%), help children (10%), and help older people (8%). However, after 2000, things changed. There are now practiced all relevant form of companies' involvement in the community problems solving (ARC (1), 2006):

### 3.1. Donations and sponsorship

A survey conducted in 2003 by the Association for Community Relationship indicated that 29% of Romanian companies made cash gifts, while 24% made in-kind donations. Data shows that the number of companies located in small towns (less than 30,000 citizens) making donations is double compared with the number of businesses in big cities (50% vs 26%), but, as expected, the average donation and the total amount given increases proportionally with the resident location size. Concerning the distribution of funds according to the type of recipient organization, it reveals that the largest group of beneficiaries is NGOs with 18.4%, followed by schools and kindergartens (17.1%) and the Church with 16.5%. Related to the distribution of funds by fields, religion cumulate 13% from companies allocations,

followed by education and research with 9.8%, but only 1-2% from donors amounts reach to environmental protection, human rights and democracy causes. The data show that the average donation of companies in Romania is around 0.4% of their annual turnover, comparing with 1.2% of annual pre-tax income for an U.S company. As a general assertion, most business donors give rather small amounts (almost half donate less than US\$ 400 per year). However, these data must be seen in the context of the generally poor status of the Romanian economy. Only a minority of Romanian companies (12%) have significant budgets for donations (more than US \$3,500 per year). In terms of frequency of giving, a quarter of companies make donations more than five times per year, and another quarter donate just once a year (ARC (2), 2003) and (ARC (3), 2003).

Romania is still behind other countries in the region. In 2006, the overall value of the donations from Central and Eastern Europe companies (Russia included) was 127.7 million euros, according to "Central and Eastern European Network for Responsible Giving". If on local side, in 2006, the first 10 companies from the Romania Donors Forum provided almost EUR 3 million, the top 10 companies in the Czech Republic provided EUR 25.6 million, and in Slovakia EUR 3.5 million. In Hungary, the amounts offered by the companies for the non-profit organizations reached EUR 6.3 million (Anton, 2008). However, the attitude of Romanian companies to CSR tends to improve. Comparing with individual donor patterns, here there is a strong consensus between analysts that progress has been highly visible in the last years regarding a highly visible progress. Thus, in the last 5-6 years, the amounts given by larger, national scope corporations range between 3,000 EUR – 500,000 EUR, depending on size of project or its priority and significance for the company, on the corporate philanthropy market. Still, most of these situate somewhere in the 5,000 EUR – 50,000 EUR range (Porumb & Sofica, 2008).

The research has shown that the dynamics in the corporate giving is linked to the pioneering example of multinational companies who have developed frameworks for social corporate in their headquarters or already have experience in this area. While national companies prefer projects with national coverage, there are also local examples or CSR projects undertaken by local SMEs, or by decentralized structures and components of large corporate initiatives. This shows clearly that there are sufficient opportunities and needs where CSR programs can be developed in the future. Although most (primary) data provide information on large firms initiatives and behaviour, of their involvement in large projects, particularly visible through adequate advertising support (sometimes extensions of international campaigns), there is also a relevant dimension of CSR in the local firms. Interestingly, the data shows that small businesses tend to follow individual donors pattern, and less the corporate ones.

### **3.2. Salary donations**

This model is very common in the US and UK, its success being ensured by the incentives made by legal framework. The mechanism consists in monthly donations made by employees from their after-tax salary; usually, the company doubles the amounts and redirect the money to a non-profit organization. For Romania, it has to be mentioned some projects of great multinational companies, such as Coca Cola HBC Romania, Vodafone, United Way, Unicredit Tiriatic Bank or Raiffeissen Bank. Every year since 2004, Coca Cola HBC Romania involved its employees in a salary donations program, for supporting a school choir, an institution for old people and a

school for disabled children. Vodafone started to practice this mechanism in 1998, the beneficiaries being individuals in risk situations, orphan children, ill persons, and institutionalized old people. Also, Matching Gift Program initiated by UniCredit Foundation in 2003 (continued annually until 2011), aims to provide support to children and disadvantaged people (Responsabilitate socială, 2012).

### **3.3. Corporate volunteering**

Volunteerism is a key component of many companies' philanthropic and community affairs programs. Corporate volunteerism can be a triple win: helping people in the community while giving employees a chance to shine and benefiting the company in numerous ways. The company encourages its employees to put their time, ability or expertise in the service of an organisation or of the community itself.

At European level, Business in the Community (BITC) has launched a competition in 2011 in 22 European countries (including Romania) and awarded corporate volunteer programs. Initiative called "Employee Volunteering Awards" was co-funded by the European Commission. It took place in the context in which 2011 was declared "European Year of Volunteering" (CSR Europe, 2012). Some examples for Romania are: Lafarge Romania, that made a long term partnership with Habitat for Humanity Romania, supporting the construction of houses for poor people; GlaxoSmithKline in a partnership with the Hospice House of Hope, providing personal care for ill persons in terminal phase (Voluntariat.ro, 2012).

### **3.4. Corporate foundations**

The corporate foundation is a non-profit independent entity, financially supported by a company. The amount of the fund raising is quite impressive in some cases and it includes grants, scholarships, employee matching gifts, and other amounts; for example, in the US, the largest grant making foundation is Bill and Melinda Gates, with an amount exceeding US\$ 2bn., followed by many other corporate foundations as Lilly Cares Foundations, The Ford Foundation, The William and Flora Hewlett Foundation (Foundation Center, 2013). In Romania, the most important foundations belong to multinational companies, such as Partners for Life, settled by GlaxoSmithKline, Ronald McDonald, Sirois (Vodafone) but there is also a national example, the Sensiblu Foundation, settled by A&D Pharma. Now there are registered more than 100 corporate foundations, but only 15 are consistently involved in philanthropic acts. Some of them co-operate with non-profit organizations for project achievement (MOL Romania, Vodafone, Coca-Cola, Anchor Group) and some create their own programs (RTC Foundation).

### **3.5. Cause Related Marketing**

Cause Related Marketing is an undertaking assumed by the company to direct for a well-defined cause a part of the profit earned from a specific product or service for a limited time period. This practice is more efficient for companies, since for 70% of the consumers, the social involvement of the company from which they buy products is important in the choice process and 20% of them are even willing to pay more for the products provided by a socially involved company (CSR Europe, 2012). Some examples for Romania include: the project *A computer, an extra-chance for the future* (Procter&Gamble 1999), *Together for the Children* (Kraft Jacobs 2002), *Together for the Future* (Vodafone 2005), *Chance to life, chance to new memories* (Procter and Gamble Romania, 2008), *UNICEF Cards - 1%* (Unicredit Tirioc Bank,

2010), *Soft Toys for Education Campaign* (IKEA Romania, 2010, 2011, 2012), One Pack = One Vaccine (Pampers Romania 2010) (Responsabilitate socială, 2012).

#### 4. Conclusion

The main conclusion is that in Romania there are still important differences between multinational companies operating in the country and national companies, and also differences between big and small/medium size companies. Companies still use rarely the charity action, moreover, companies did not completely understand the importance of these actions for marketing, PR and enhancing image, maybe, perhaps NGOs are not perceived as potential vehicles to enhance the company's image, or many companies do not have the ability to integrate corporate philanthropy in PR activities or marketing strategies. However, in the last decade, the international trend to adopt a CSR strategy is followed more and more by local companies, which are in the process of building a medium term strategy for involving in community. CSR is undoubtedly a real gain of social and humanitarian perspective in society. The realities of the Romanian economy and society of the last years have captured both the wave of models, the enthusiasm and involvement of corporate sector in social problems, both the impact of economic crisis on the continuity and real sense of social projects, regardless the size and power of their supporters. In order to maintain the social value of CSR and to give a real sense to business ethics, the CSR managers should try to temper their desperately seeking of convincing evidence that "doing good is good for business" i.e. to avoid passing in the CSR payment bill the costs of every current and strategic business decisions. Invoking the monotonous and sometimes aggressive business motto rather creates doubts that it would not be self-evident that the emerging and functioning of the companies, the business in general are not based on the needs of society but rather on occult and unethical reasons.

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Companies' websites

# MODERN INDICATORS DERIVED FROM VALUE CREATION AND DISCOUNTED CASH FLOW METHODS

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**Abstract:** *The manner in which resources are allocated, the generation of cash through present resources and the allocation of new liquidities derive from a company's cost-benefit analysis, which is part of management control. The modern financial theory changes the company management objective of maximizing profit with the objective of maximizing its value. The traditional return measures are considered to be insufficient to express the economic reality. Traditional cost-benefit indicators exclude opportunity costs, effects of inflation and risks. The financial experts claim firm value maximization as the main objective of a company's management. The emergence of modern return measures derived from firm value maximization reflects the changes in the economic environment, their emergence creating a dispute over the most appropriate approach regarding value creation. The fact that the data required for their calculation is taken directly from accounts makes them sensitive to accounting distortions. The emergence of modern cost-benefit indicators derived from value creation provides new perspectives on the return. Firm value can grow by generating a higher level of cash flow, by reducing financing costs and by extending the growth period. The value created can be measured by using both modern indicators derived from the theory of value creation and discounted cash flow methods. The value created can be calculated by using discounted cash flow models, which, moreover, are very complicated and take into account a lot of variables. The alternative to these methods is represented by modern cost-benefit indicators that have a more simple calculation methodology, and the forecast of calculation factors is narrower and easier to accomplish.*

*In this article, we will present the connection between discounted cash flow methods and the indicators derived from value creation, based on the business finance theory, which says that firm value will increase if projects with positive net present value are accepted, while it will be destroyed if projects with negative net present value are accepted.*

**Keywords:** *modern return measures; economic value added; discounted cash flow model; the net present value; the internal rate of return; cash flow return on investment.*

**JEL Classification:** *G32; M21.*

## **1. Introduction**

Since the 1990s, the traditional return measures are considered to be insufficient to express the economic reality. The financial experts claim firm value maximization as the main objective of a company's management. The emergence of modern return

measures derived from firm value maximization reflects the changes in the economic environment, their emergence creating a dispute over the most appropriate approach regarding value creation. The cost of financing sources is one of the primary factor in foundation financing policy, having the greatest impact on company results and hence on its value (Pirtea, Boțoc, and Nicolescu : 2010).

The value created can be measured by using both modern indicators derived from the theory of value creation and discounted cash flow methods. Modern performance indicators require less information than the traditional approach of discounted cash flow, and some believe that they are better at expressing value.

## **2. Modern Performance Indicators Derived from Discounted Cash Flow Methods**

The Discounted Cash Flow Method is a standard procedure of the modern financial theory that provides perspectives on how a company can create value. This model is widely used in investment finance, real estate development and corporate financial management, which is why in practice it enjoys great importance and is considered to be the basic method of estimating firm value. Since 1929, the discounted cash flow analysis gained popularity, it being used for estimating shares. The Discounted Cash Flow Method is expressed formally in modern economics by Irving Fisher in 1930 and John Burr Williams in 1938.

Firm value is the sum of all future discounted cash flows at the risk of bearing debt. Firm value can also be regarded as the sum of the value of all assets – where asset value is given by the discounted cash flow resulting from the operation of the asset (Damadoran, A., 2002). In other words, cash flow resulting from a company's businesses is discounted at a rate that equalizes their risk. The formula for calculating firm value by using the discounted cash flow method is:

$$VF = \sum_{i=1}^{n-1} \frac{CF_i}{(1+a)^i} + \frac{RV}{(1+a)^n}$$

where: VF = firm value;  $CF_i$  = cash flow in year  $i$ ;  $a$  = discount rate; RV = residual value at the end of the period;  $n$  = life cycle of investment expressed in years.

To evaluate a company, both cash flows generated by the business and the expected growth value are needed. Therefore, the following should be considered:

- Free Cash Flow - is the monetary expression of business operations result, representing in fact the cash that returns to investors: shareholders, debt holders, preferred shareholders etc. It can be derived from the operating cash flow from which the cash required for the business development and the development of production capacity. The variables will be estimated based on a strategic analysis of the company's development potential, which must take into account the internal and external potential of the company.
- Expected Growth - it can be obtained based on the reinvestment coefficient multiplied by the return on capital. The reinvestment coefficient is calculated as the ratio of the net operating result, which is invested in net capital expenditures and non-cash working capital.
- Discount Rate - it is established based on the Weighted Average Cost of Capital model. The Weighted Average Cost of Capital is the weighted average of all costs involved in investment, equity and loan capital respectively. It reflects the cash flow risk. A common problem in practice is the cost of equity. To determine

the cost of equity, we may use the dividend discount model and the capital asset pricing model. The first model is the traditional method used and is based on the discount of dividends with the shareholders' required return, and the second shows the investors' risk premium through the relationship between the expected return and the risk assumed.

- Asset life cycle – residual value - the life cycle of every project has a finite number of years, upon which the forecast is based, which is why it is very important, both in terms of cash flow estimation for a well-determined period, and terminal value estimation.

In the discounted cash flow analysis, all future cash flows are estimated and discounted to give present value, and their sum is represented by the net present value.

The most common techniques using discounted cash flow is the net present value and the internal rate of return. These include the discount technique, their limitation being that they do not take into account depreciation. These dynamic methods for allocating capital resources are often used in the USA and UK, both in the public and private sector.

*The Net Present Value* is a discounted cash flow technique that indicated cash inflows and outflows discounted at the present value. It can be used both to analyze a business and for future projects or divisions of a company.

It is said that there is no difference between what net present value and discounted cash flow represent. Using these two methods is different from what is aimed to calculate:

- discounted cash flow method is used to evaluate complex investments that may have different assumptions regarding cash flow, multiple equations, inflows and outflows
- net present value is used to analyze projects with a well-defined life cycle including cash inflows and outflows that are easy to estimate.

*The Internal Rate of Return* equalizes the cash inflows and outflows at the present value. This dynamic analysis method is generally used to allocate capital resources for a certain project.

The Internal rate of return calculated with the net present value determines the expected rate of return and the discount rate that should correspond to the risk level of the project. In both cases, an internal rate of return may determine the expected total rate of return, and the discount rate should correspond to the risk level of the project.

The discount used as single technique, with no attachment to other evaluation criteria, may lead to certain projects, desirable at first sight, but not profitable. Therefore, multiple discount criteria, as well as traditional estimation criteria should be used in assessing the efficiency of an investment.

Modern performance indicators are said to achieve the same thing as the dynamic methods of investment assessment, i.e. discounted cash flow methods. Discounted cash flow methods are very complex because of the multitude of variables to estimate, and a bonus management system can not be drawn on their basis, as it is very difficult and not recommended, because the accounting data might be manipulated by executives in their own interest. Modern performance indicators are easier to calculate, use and understand, as the estimates made for their calculation are fewer and do not depend on market movements. Next, I will present two most

famous modern indicators for measuring performance: Economic Value Added and the Cash Flow Return on Investment.

*Economic Value Added* is considered to be the most common indicator for measuring shareholder value. Economic value added is a measure that allows managers to see whether they gain a proper return (Harper Collins, 1991). If the return is lower than the expected one for similar investments, resulting in a negative indicator, the company faces share price decrease and capital flight. One way to calculate the economic value added is to multiply equity by the difference between return on equity and its cost:

$$EVA = (\text{Return on equity} - \text{cost of equity}) \times \text{Invested capital}$$

To increase firm value, each project accepted must have a positive net present value, i.e. the internal rate of return generated by the project will be higher than the cost of equity. In practice, we do not employ the internal rate of return for measuring performance, but the traditional rates of return to estimate the rate of return on equity, although it does not indicate the real return (Storrie and Sinclair, 1997).

*Cash Flow Return on Investment* is defined as the gross annual cash flow related to the capital invested on business units (Lewis and Günther, 1997). Cash Flow Return on Investment corresponds to the average internal rate of return for a short period of an investment, based on the cash inflows and outflows of investments and their recovery. The calculation formula for this indicator is as follows:

$$CFROI = \text{Cash flow} / \text{Market value of capital employed}$$

or solution in formula: 
$$I = \sum_{n=1}^i \frac{CF_i}{(1+CFROI)^n} + \frac{W^{n+1}}{(1+CFROI)^{n+1}}$$

where: W – expected residual value of non-depreciable assets; I – Gross investment in operating assets; CF – gross cash flow; n – life cycle of investment

### 3. Critical Review of Modern Performance Measurement Indicators

#### 3.1. Economic Value Added versus Discounted Cash Flow Method

The rule of net present value is one of the analysis fundamentals of investment decisions in corporate finance. Economic value added is a return to the net present value rule. (Damadoran, 2002). It is well known that in order to increase the value of economic value added, projects with positive net present value should be accepted, otherwise, the adoption of projects with negative net present value decreases the value of the indicator. The cost of capital and the inflation are common aspects considered in the calculation of economic value added and net present value, and the adjustments made do not give place to accounting distortions.

Discounted cash flow / net present value and economic value added, in theory, have the same mathematical result. (Stewart, 1990). Stewart also stated that the economic value added formula is a modification of the discounted cash flow formula through a mathematical construction in which all adjustments made in calculating economic value added to the discounted cash flow must result net zero. He also mentions regardless of the starting capital used in calculating economic value added, the results are always the same.

Present value of economic value added of a project over its life is the net present value of the project.

Otherwise, a connection between economic value added and discounted cash flow model can be made (Damadoran, 2002). The amount of capital invested in assets

held, the present value of economic value added and the present value of economic value added of future projects is, in fact, the firm value:

$$VF = \text{Invested capital assets held} + \sum_{i=1}^n \frac{\text{EVA}_i \text{ assets in place}}{(1+a)^i} + \sum_{i=1}^n \frac{\text{EVA}_i \text{ future projects}}{(1+a)^i}$$

where: VF – firm value; n – life cycle of investment expressed in years; EVA – economic value added; a – discount rate;

Delimitations between net present value / discounted cash flow and economic value added:

- this equivalence between net present value and economic value added is sensitive to the book value of capital when calculating the economic value added. An increase in the book value of capital, which attracts a higher cost of capital, has as result a lower economic value added. The change of the two variables, as well as the fact that the market value of capital is always the same, regardless of the initial book value, shows a lack of relevance in determining the value (Storrie, Sinclair, 1997).
- the level of residual value and depreciation tax benefits make economic value added and net present value give different results. This is possible when the present value of invested capital is lower than the residual value or the present value of benefits from depreciation.
- the equivalence of the two methods is real before making the adjustments required for the calculation of economic value added, after that, they will lead to different results.
- firm value (seen as the sum of invested capital and the present value of economic value added) may decrease, even though the economic value added grows on the background of the operational risk increase and cost of capital supplementation.
- economic value added is a well-known measure, used for both performance assessment and for employee compensation. Discounted cash flow methods are useful in strategic planning (capital resources allocation) and assessment. It provides a picture of the necessary cash flows for business requirements and facilitates the understanding of short- and long-term risk.

Thus, the discounted cash flow methods are not used to measure performance and an employee bonus system based on it would be extremely difficult and unsatisfying. In evaluation, under certain conditions, the equivalence of economic value added and discounted cash flow methods can be met, but it does not express performance. Conversely, it comes into question whether the economic value added can be used for the same purpose for which discounted cash flow method is. Economic value added can neither provide a picture of the necessary cash flows for business requirements, nor an understanding of short-term and long term risk. Economic value added indicates whether the initial capital produces positive or negative levels, a measure that can have high levels with low initial capital, while the discounted cash flow analysis can indicate that the proposed strategy may lead to value destruction. When analyzing a company, one must take into account both the economic value added and net present value, and the internal rate of return and return on investment. The shareholder wealth is first considered, followed by the expected return. The economic value added and the return on investment are used to measure performance, while the net present value and the internal rate of return are used to determine a project's return. Future decisions of the company are based on the

economic value added and net present value, which provide information on the firm value maximization. It must be well defined that no decision should be taken based solely on rates of return, because they provide related data. Maximizing internal rate of return and return on investment is a wrong objective if it aims to increase shareholder return.

### 3.2. Cash Flow Return on Investment versus Internal Rate of Return/ Discounted Cash Flow Method

*Cash Flow Return on Investment* is an indicator similar to the internal rate of return (Damadoran, 2002). Cash Flow Return on Investment can be seen as both an after-tax rate of return on existing assets, and a rate that adjusts net present value of the cash flow generated by existing assets equal to the cost of investment.

*Internal Rate of Return* is calculated based on net cash flows generated by the project based on the initial investment (also taking into consideration the terminal value). Internal rate of return is compared with the cost of capital. This can be calculated as a nominal or real rate, depending on the nominal or real cost of capital. Mathematically, we can say that the Cash Flow Return on Investment has the same determination. It calculates a real internal rate of return based on the project's gross investment (initial investment) with the assumption that gross cash flow surplus in monetary terms is maintained throughout the entire life cycle of the project.

To highlight the relationship between firm value and cash flow return on investment expressed by using discounted cash flow, a number of variables should be taken into account, such as: gross investment, tax, growth rate, cost of capital and reinvestment needs of the company. Firm value expressed by using cash flow return on investment is as follows (Damadoran, 2002):

$$FV = \frac{(CFROI \times \text{gross investment} - \text{depreciation}) \times (1 - \text{tax}) - (\text{capital expenditure} - \text{depreciation}) - \Delta WC}{\text{cost of capital} - \text{sustainable growth rate}}$$

where: FV – firm value;  $\Delta Wc$  – changes in working capital.

One can see that firm value is influenced by both cash flow return on investment of assets held and the way this rate handles the cost of capital.

Delimitations between cash flow return on investment and internal rate of return / discounted cash flow method:

- cash flow Return on Investment is built on the premise that real cash flow does not increase over time, and the internal rate of return can also be calculated based on net cash flows that fluctuate over time. It is easy to conclude that Cash flow Return on Investment cannot be used for projects in markets with high growth potential;
- cash flow Return on Investment can be used in both retrospective and prospective analysis, and the internal rate of return can be calculated only for future projects;
- when the assessment of return is based on Cash flow Return on Investment, managers can increase the rate of return by subtracting gross investment, resulting in a lower firm value. Thus, an increase in the Cash flow Return on Investment may result in a decrease in firm value if it is done at the expense of an increase in value or by increasing risk.

### 4. Conclusions

Based on these theoretical approaches it can be concluded that:

- the financial theory regarding firm value argues that firm value will increase if accepts projects with positive net present value are being accepted. Economic value added and Cash flow Return on Investment are similar methods to consider net present value.
- if the main objective of the firm is to maximize value both in its strategy and culture, then any method used to increase value can work.
- economic value added is regarded as the present value of the expected economic profit, so it is considered to be the new equivalent to the net present value.
- cash flow Return on Investment can be seen as the after tax rate of return of existing assets, as well as the rate that adjusts net present value of cash flows generated by existing assets equal to the cost of investment.
- net present value and internal rate of return are used in the evaluation and strategic analysis of the company; economic value added and Cash flow Return on Investment are useful in evaluating performance; they can not provide information on understanding of short-term and long-term risk.

Modern performance measurement indicators are easier to calculate, and data considered in their calculation are fewer compared to discounted cash flow methods. However, they are insufficient for assessing firm value, as they do not take into account all the necessary variables in determining value. For a complete analysis of a company, both modern performance measurement indicators and discounted cash flow methods are required.

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## INVESTMENT FUNDS IN ROMANIA

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**Abstract:** *I chose this topic because my goal was to capture in detail all aspects of the evolution of investment funds under the influence of factors leading to globalization of the banking financial market. The main motivation was that I proposed to present in an original manner the concept of investment in mutual funds by the thoroughness of the following points: the different types of investment funds from Romania, the advantages, the risks and the specific costs of the investment in mutual funds and the effects of the financial crisis on the industry of the investment funds on the national level. The financial crisis and the risk of infecting the global economy affected the taste of risk of the investors and their request for the investment fund, determining the orientation of the investors to the funds with a lower risk – the diversified funds, the funds of bonds and the monetary funds. I considered important the theoretical approach of the concept of investments in investment funds because they are a barometer of the macro economical stability, in case the economical increase is positive on the macro economical level, the investments in investments funds are increasing too. In Romania the market of the mutual funds is at an incipient level, but with potential and perspectives of development. Due to the bankruptcy of FNI in the beginning of the years 2000 and due to the absence of a clear legislation regarding the calculation of the unitary value of the net asset and the control of the activity developed by the investment funds, the development of the industry of the investment funds had to fight against the crisis of credibility generated by these events. The convergence of the Romanian economy to the European standards will attract also a modification of the structure of the financial investments of the individuals, by an increase of the investments in funds. In the world the investment funds are preferred by the investors for their advantages, respectively the investment in instruments with larger capacity, the flexibility determined by the possibility of withdrawal in any moment without losing the cumulated gain, the administration of the portfolio by the professional administrators, the access to diversified placements with small sums, the reduction of the risk by the diversification, the strict regulation and surveillance of the activity of investments administration by the authorities surveying the financial markets. In the developed countries, the placements in administered investments can reach up to 40% of the financial assets of the families, and the deposits own a percentage of 40-50% of the assets, while in Romania the percentage of the investments administered from the total financial assets of the families is under 10%, and the placements in deposits represents over 80%. I consider that the founding of the subsidiaries of assets management in Romania by the banking financial groups contributed and will contribute in a great measure in the future to the increase of the degree of knowledge and acceptance of the investment in investment funds.*

**Keywords:** investment funds, investors, efficiency, portfolio, placements, fund units.

**JEL classification:** A11, E44, G11, G12, G21

## **1. Introduction**

The globalization and the regionalization placed their imprint on the Romanian financial bank market. We can observe that similarly with the tendency of concentration, segmentation, respectively the restructuring of the bank activity on many levels in the developed countries, there are, beside the commercial banks also the specialized one, which will offer the circumstances of the bank management improvement and of the efficiency. (Opritescu 2003) The bank globalization is performed geographically and structurally, the main financial bank groups are real aggregations that include banks, insurance companies, investment funds, the so called integrated financial services. The existence of these subsidiaries will lead to the increase of the degree of coverage of the investments in investment funds.

In this paper I proposed to analyze the types of investment funds existent in Romania, the advantages and the risks related to the investment in mutual funds and the impact of the financial crisis on them. The notion of mutual fund is different from one country to another, these collective investments plans being known with the denomination of mutual funds, investments funds, administered funds or simply funds. According to the Association of the Fund Administrators the investments funds are entities that cumulate money from many people (investors in funds) money that the administrator of the fund is investing according to the declared policy of the investment of the fund, in: instruments of the monetary market, municipal or/and corporate bonds, shares bargained on the stock exchange market, and in other movable values allowed by the regulation authority (CNVM). The profits thus accomplished are redistributed by redeeming of the fund units, to the same investors.

The financial crisis determined on the world level and on the European and national level, the orientation of the investors' preferences to investment funds with a lower risk, respectively to diversified funds, of bonds and those monetary.

I consider that the improvement of the legislation in this field, the development of the pension funds, of insurances and the macro economical stability will lead to the increase of the investments funds.

## **2. Short history of the investment funds**

The investment funds became known for the investors in the period of the years 1980 – 1990 when the invested sums of money and the obtained efficiency reached very high levels. The idea of accumulating money from many persons and their professional administration by specialized persons by investing in financial instruments is much older.

The origin of the funds is uncertain – some studies sustain that the first mutual funds, closed investment funds were initiated in Nederland in 1822 by king William I; other studies affirm that the idea of creating the investments funds was given to the king William I by a Dutch trader Adriaan Van Ketwich who owned an investment company even since 1774. He sustained that the diversification is that which determined the increase of the interest to invest of the small investors who owned smaller amounts

of money. The name of the investment fund created by Ketwich, *Eendragt Maakt Magt* is translated by "the unity creates power".

The first closed fund of investments created in USA in 1893 was Boston Personal Property Trust. The launching of the Alexander investments fund in Philadelphia in 1907 was a large step in the history of the modern mutual funds. In 1928 was launched the Wellington investments fund, the first mutual fund that invested in shares and bonds. The financial crisis from 1929 determined the reversal of the dynamics of the investment funds, the closed funds of investments being liquidated in a great measure, only a few of the opened investment funds succeeding to survive. The expansion of the industry of mutual funds determined also the creating/improving of the legislative background specific for the regulation of the conditions regarding the registration of new mutual funds, the protection of the investors, the delivery of information to them with the help of the funds prospects. According to the historical information regarding the mutual funds, they became popular in the last 20 years.

### **3. The presentation of the types of investment funds**

According to the Erste Asset Management a fund is actually a portfolio of financial instruments administered by experts (administrators) who respect the legal requests regarding the diversification of the risks. By the aggregation of the investments performed by the investors, the fund disposes of enough capital to be able to invest in diversity of financial instruments on some markets. In case he would act individually, the investors would find a series of difficulties or would need large sums of money in order to obtain the results offered by the fund. The investors own fund units that represent titles of participation in the fund assets.

Every fund invests depending on its own policy of investments in different currencies, in financial instruments from different geographical regions or belonging to some sectors of activity, the funds promoted with different name considering the geographical regions where they invest (Emerging Europe) or some activity sectors, (ex. Technology). It was found that depending on the country and the risk of the currency in which the fund invests, there is a preference for the funds that invest in the local currency or in the financial instruments on the internal market. The preference of the investors for some investment funds is established depending on the investment policy of the funds, their past performances, the commissions related to the investment in funds, etc. Some funds of investment are addressing to some sophisticated investors, others are addressing to those from the Private Banking category.

The investment funds can be, depending on the class of assets in which they invest – monetary funds, bond funds, diversified funds and share funds; each of these funds are associated different degrees of risk.

- *The monetary funds* invest in instruments of the monetary market. The objective of these funds is to protect the invested sum of money and to assure an income. These funds are addressing the conservatory investors, with a decreased risk profile, the average period of the placements is of 1 year.

- *The bond funds* invest in municipal, corporatist bonds or in state titles. These funds have a strategy of investments based more on obtaining the income than on the increase of the investment. The bond funds are addressing to the investors that want

to obtain performances of the investment higher than those related to the investment in instruments of the monetary market.

- *The diversified funds* invest in shares, bonds and sometimes in instruments of the monetary market. These funds have a strategy of investments based on income, increase and stability and are addressing the investors that want to obtain an income but also a potential increase on a long term higher than in the case of the bond funds.

- *The share funds* invest in shares. These funds have a strategy of investments based on the increase.

In Romania, the investment funds are found in the following forms:

- *Organizations of collective placement in movable values* (OPCVM) in the form of open investment funds (open end funds; UCITS)

- *Other types of organizations of collective placement* (AOPC) in the form of closed funds of investments and companies of financial investment (SIF) whose shares are bargained at BVB (closed end funds; non UCITS).

Between the open funds of investment and those closed the main difference consists of the way the issuance of the fund unit is organized.

The open funds have a permanent issuance of fund units as opposed to those closed which don't have a continuous issuance and are addressed to a limited number of investors. The open fund of investments is a civil company, without a juridical personality, that collects the money available from investors by continuous issuance of fund units, invests in financial instruments and distributes the income to its investors, in the moment of the redemption of the fund units. Not having a juridical personality, the open funds of investments are administered by a company of investment administration (SAI). A company of investment administration can manage one or more mutual funds.

To the open funds can permanently be subscribed investors, new ones and those well established in the fund. In the same time, some investors can withdraw completely or can redeem a part of the number of fund units owned.

In case of a closed fund of investments, is issued a limited number of fund units during an initial public offer (IPO). Afterwards, these units are transitioned directly or to the share market by the fund manager. If the request for units is great, they can be traded with a value greater than the value of a fund unit (are traded with bonus). Similarly, if the request for units is reduced, they can be traded with a value smaller than the value of the fund units (are traded with discount).

### **3.1 The method of functioning of the mutual funds**

The present value of the assets of the fund represents the total assets of the fund. If these total assets are subtracted the present expenses of functioning of the fund it is obtained the total of net assets. The unitary value of the net assets (VUAN) or the value of the fund unit is obtained dividing the total net assets to the number of fund units. The value of the net assets, the unitary value of the net assets and the number of investors is calculated daily by the company administering the investment and is certified by the depositary. The value of the net assets and the unitary value of the net assets will be published by the company administering the investments daily for each working day in newspapers in the financial field and on the website of the administration company and will be posed daily for each working day at the registered office of the company of investments administration and at the registered office of the agents distributing the fund units. The list of the distributor agents can be accessed on the website of the company of investment administration.

### 3.2 The advantages of the investment in an investment fund

The advantages of the investment in mutual funds are the following:

- The investment funds represent diversified portfolios of financial instruments, *the related risk being smaller* than the risk associated to each financial instrument in part. As a consequence a diversified portfolio can obtain good results even if some shares register losses.
- The legal structure and the strict regulations that govern the investment funds offer a *very large protection* against the fraud or the illegal financial practices.
- Each investor has at his disposal the prospect of the fund, which includes all the document that are used for the functioning of the fund, assuring thus a great degree of *transparency*, can be accessed in any moment the website of the fund.
- With an *investment relatively small*, the investors can participate to investments on financial markets that are difficult to be accessed by the small investor.
- the mutual funds pay *smaller commissions of trading* than the individual investors. The costs of trading more reduced are translated in better performances of the investments.
- The open funds of investments offer *more liquidity* than the other financial instruments. The investors have the possibility to exit the fund investment in any moment, by the redeeming of the fund units by the fund. The value of the fund unit is calculated daily, they can be purchased and sold in any moment by filling in a simple form. The investment funds are obligated by law to accept any redemption of the issued titles.
- *The professional management* – a specialized team takes the decisions of purchase and sale, on the basis of some detailed analysis. More over while the conditions of the market are changing, the management of the fund is restructuring the portfolio, so that the financial objectives can be reached, the portfolio is monitored and optimized permanently.
- *Protecting the investments* – the investment funds and the administration company of these funds need to respect the laws and the strict rules imposed by the National Commission of the Movable Values..

### 3.3 The risks associated to the investment in investment funds

The investments in investment funds are not guaranteed by the state and the investment funds don't participate to the fund of guaranteeing the bank deposits. The investment in a mutual fund can increase or decrease depending on the evolution of the price of the financial instrument in which the fund invests. The past performances of the investment fund don't represent a guarantee of the future accomplishments. The mutual funds invest in financial instruments that presuppose a certain degree of risk. This degree of risk related to financial instruments is different depending on the expected efficiency. The obtaining of performance is in a close relationship with the assumed degree of risk, thus, for a decreased level of risk, the level of expected performance is decreased and for an increased level of risk the expected performance is increased. The clients have to know the risk they are exposed when they choose an investment fund. For example when they decide to invest in instruments with fixed income they involve a decreased degree of risk but also a reduced expected efficiency. The investment in shares implies an increased risk but also an increased expected efficiency. The managers of funds have to respect the rules of the fund which are approved by the National Commission of the Movable

Values and the effective legal provisions, also the administrator has the possibility to administer the assets and won't access the money of the investors which are controlled by the depositary.

### 3.4 The investment funds in Romania

The market of the mutual funds from our country is still at a low level comparing to other countries from The European Union but with an increased potential of development. The lack of trust in the investment funds in the last 12 years was due to the National Fund of Investments, which prejudiced a great part of the investors of that time. This was due also to the precarious legislation regarding the calculation of the unitary value of the net assets and the control of the activity developed by the investment funds. In this period it had to be done a hard work for the regaining of the trust lost, the legislation in this field was improved so that the investment funds began to become "a world to be conquered", as the specialists from Erste Asset Management say.

This legislation was aligned to the European legislative regulations. The way the investors are protected in the present legislation and all the links related to the launch of such a product, shows clearly that the bankruptcy of a mutual fund is not possible. For sure the value of a mutual fund can decrease according to the evolution of the market but the possibility of a fraud or the major losses are excluded.

It was observed in some countries from Central Europe and Eastern Europe that in the first place the economical stability correlated with a rate of inflation reduced lead to the development of the investment fund market. Also the appearance of some pension funds, of insurance, that want to place the sums of money for long periods of time with better efficiency than for the bank deposits lead to the increase of the degree of intrusion of these funds on the market.

We can say that the secrets of the investment funds would be the great force of negotiation of the interest including for the deposits of large sums of money, and the better efficiency obtained by the professionals.

Since 2000 and until the present the mutual funds from Romania attracted over 245.000 investors, reaching to a record level. This number is important more over because it was reached in the conditions of the financial crisis.

Year	Investors	Funds	Assets (mil.lei)
2005	71.021	23	339
2006	78.380	32	633
2007	82.458	41	954
2008	90.694	52	940
2009	164.446	51	3.350
2010	221.862	57	5.488
2011	233.777	61	6.781
2012	241.368	63	8.811

Figure 1: The evolution of the open fund investments market 2005-2012  
Source: The report of the association of the fund administrators

We can observe that in the last eight years the number of the investment funds and the number of investors was tripled and the invested assets increased from 339 mil to 8.811 mil. Ron; that shows that more Romanians chose beside the convenience of the deposits the investment funds as an alternative that offers them a better efficiency. In the period of financial crisis were preferred the funds that have a lower degree of risk, are liquid and offer better efficiency.

In Romania, beside the local mutual funds, namely the investment funds belonging to the organizations of collective placement from Romania, are distributed also fund units belonging to the organizations of collective placement from members states from The European Union.

The organizations of local collective placement in movable values (OPCVM) were consolidated beginning with the year 2009 the role of alternative solution of saving, attracting publicly the significant financial resources from the individuals and juridical persons. Thus, after an easy repulsion in the previous year, the industry of the investment funds registered beginning with the year 2009 a significant positive evolution, in the level of the number of investors, and in the level of the net assets in the administration.

In 2009, the number of investors in open funds of investments (FDI) AAF members (The Association of the Fund Administrators from Romania) increased with 81% comparing to 2008 (164.446 investors), especially due to the individuals investors, the total number of investors in the open investment funds and AOPC (Other organizations of collective placement) reaching to over 250.000, and in 2012 the total number of investors was of 335.000. The value of the net assets was influenced positively by the recovery of the quotations of the listed share and by the significant increase of the number of investors and their volume of investments. The sum of net assets of the open fund investments at the end of 2009 was of 3,35 billion RON, 256% over the level registered at the end of 2008, and in 2012 of 8,81 billion Ron. The first 5 administrators of funds registered the following total market shares on 31.12.2009: Erste Asset Management – 43,08%, Raiffeisen Asset Management – 30,23%, BRD Asset Management – 8,49%, BT Asset Management – 4,86% and OTP Asset Management – 3,28%. On 31 January 2013 the market shares were the following: Erste Asset Management – 37,48%, Raiffeisen Asset Management – 33,37%, ING Asset Management Bucuresti-12,43% and BRD Asset Management – 7,41%. It can be observed that Erste Asset Management is the financial group with the largest market share in 2009 and in the present.

In the table presented below is presented the evolution of the investment funds (open and closed) in December 2012 comparing with the previous month and the beginning of 2012.

31.12.2012	Open funds of investments (OPCVM)							Total	
	Monetary	Bonds	Diversified	Shares	Funds of funds	Others	Total	Closed funds AOPC	OPCVM funds and AOPC
Number of funds	1	27	23	49	1	16	117	21	138
Percentage in total assets OPCVM (%)	0,2	49,4	2,6	5,7	0,1	42	100		
Assets net (mil. Lei)	17,5	5.059	263,2	577,4	9,8	4286,2	10.790,4	420,5	11.210,9
% in the report month	-2,0	2,9	2,8	12	2,3	0,6	5,5	1,9	7,4
% in year 2012	-99,5	174,5	7,8	16,8	9,0	234,8	45,75	60,9	106,6
Subscriptions monthly (mil. Lei)	1688,1,1	1816,7	61,3	88,7	0,1	2378,5	6026	258,6	6284,6
Redemptions monthly (mil. Lei)	1233,9	1027,1	72,8	96,6	0,0	2055,0	4485,5	116,5	4602
Subscriptions net monthly (mil. Lei)	454,2	782,2	-11,5	-7,9	0,1	323,5	1540,5	142,1	1682,6
Number of investors	60	110392	51281	11.352	6	68.097	241368	91.684	333052

Figure 2. – The evolution of the investment funds (open and closed) in December 2012 comparing with the previous month and the beginning of 2012

Source : Association of the Fund Administrators

From the analysis of the data presented in this table we can see that at the end of December 2012, the number of investment funds was 138, of which 117 open funds of investment and 21 closed funds of investment. From the point of view of the volume of administered assets by the investment funds, the greatest percentage was owned by the bond funds - 49,4%. The great percentage of the assets administered by the bond funds is due to the aversion to risk caused by the financial crisis that oriented the interest of the investors to placements with a reduced risk.

On 31.12.2012, the total volume of assets of the investment funds had a total of 11.210,9 mil. RON of which 10.7940, mil. RON in open funds of investment and 420,5 mil. RON in closed funds of investment. Comparing to the beginning of 2012, the volume of assets of the open funds was of 333.052 on the date of 31.12.2012, of which 91.684 investors in closed funds of investment and 241.368 investors in closed funds of investment.

In December 2012, we can observe that the assets of the monetary assets decreased with 99,5%, reaching 454,2 mil. RON, the assets of the bond funds increased in December 2012 with 174,5% comparing to the beginning of the year, reaching to 5.059 mil. RON. In December 2012, these funds attracted net subscriptions of 782,2 mil. RON. The share funds registered an increase with 16,8% in 2012 the assets were of 577,4 mil. RON.

The assets of the fund funds registered an increase of 2,3% in December 2012 comparing to the previous month and an increase of 9% from the beginning of the year, having assets of 9,8 mil. RON.

The assets of the funds from the category "Other" increased with 0,6% in December 2012 comparing to the previous month, reaching to 4286,2 mil. RON. On the other side, the assets of the closed funds had in December 2012 a value of 420,5 mil. RON, increasing with 1,9% comparing to the previous month and 60,9% from the beginning of the year.

#### **4. In conclusion**

Regarding the conclusions of the research I consider that the present global economic and financial situation presents a high degree of disequilibrium due to the financial crisis. In this context, I consider that the investors will give a greater attention to the way the portfolio of investment are structured with a stress on their expectance, the understanding of the efficiency-risk correlation, orienting thus to investments with a lower degree of risk. The new philosophy of investments based on the behavior of the clients represents a major and global tendency from the economic and social point of view that will create important opportunities for the increase and transforming of the industry of investment funds.

After 2008 the investors structured their portfolio so that the risk would be minimum, increased the bond funds comparing to the deposits, in general, oriented their philosophy on investments from performance to risk and protection of the assets. The management of the risk has to be calculated actively.

The trust in the investment funds was regained step by step, we could say at this moment that more investors are considering the investment funds due to some upper efficiencies of the deposits, only at Erste Asset Management the number of investors was over 100.000 Romanians. We could say that they understood that one of the secrets of the success in investments is to widen the horizon beyond the convenience of bank deposits.

The increase of the segment of the investment funds from the last years is connected mainly by factors like the investment opportunities, the strategies of the financial bank groups relate to the distribution of the investment funds, the increase of the degree of financial bank education of the population.

I am confident in the evolution of the investment funds considering that the Romanian economical and bank environment is in a continuous dynamic with influences on the clients and on the economy, it can't remain isolated from the transformations that are produced on the international level in the context of globalization. The dynamic development of the investment funds caused by a larger range of financial instruments available and of the interesting performances brought by the investment funds until the present allows me to estimate that also in Romania the placements in administered investments will be close to 40% as in the developed countries, and the percentage of the bank deposits will reach to 40-50%. Also the consolidation of

the macro-economical stability and the decrease of the inflation will contribute to the increase of the industry of investment funds.

The perspectives of the capital market, the familiarization with such alternatives to the classic instruments of saving are some factors that would make them the most important ways of investment from the financial market.

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# CORPORATE GOVERNANCE COMMITTEES IN EUROPEAN UNION EMERGING ECONOMIES

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**Abstract** *The aim of this research is to analyze the support committees of European Union emerging economies. The importance of good corporate governance is vital for an organization, especially in the emerging markets, fact that leads to a several perceived improvements of the entity, while being more trustable, open and transparent in relationship with all its stakeholders. In our demarche we started by choosing the emerging economies from European Union, which lead us to a sample consisting of the companies listed on Bucharest Stock Exchange, Sofia Stock Exchange, Warsaw Stock Exchange, Prague Stock Exchange, Budapest Stock Exchange, without taking into consideration a specific tier. In order to have a heterogeneous sample, we did eliminate the financial institutions from our research. This study is developed at European Union level and takes into consideration the following indices: BET® BUCHAREST EXCHANGE TRADING (Romania), SOFIX (Bulgaria), WIG 20 (Poland), PX (Czech Republic), BUX The Share Index of the Budapest Stock Exchange Co. Ltd. (Hungary). The data are extracted from the Annual Reports, Corporate Governance Codes, Comply or Explain Statement or the websites of the listed companies, from period 2007 - 2011. We choose this period, because we wanted to see the evolution of the corporate governance committees' implementation from the period when the last countries from our sample joined the European Union since nowadays. Our conclusion is that we can not discuss about good corporate governance practices. Even so, we can observe from our investigation that the trend in this regard is encouraging. Like future research, we thought at developing our study by comparing the emerging economies from European Union with those outside this area. It is an interesting field of investigation, as every country has different regulations.*

**Keywords:** corporate governance, committees, emerging economies, transparency

**JEL Classification:** G30, G34

## 1. Introduction and Literature Review

*Corporate governance* is a topic which started to gain an increasing interest not only at the academic level, but also at the practical one, and nowadays the importance of good corporate governance practices is perceived widely as a vital mechanism for a healthy entity. The issue related to the **committees** is debated at global level. The need for this study is given by the fact that we must know which companies have the best corporate governance practices. However it is a little bit hard to develop such a

study, seeing that there are many Corporate Governance Codes, Standards, Laws worldwide and a convergence of all of them is quite impossible.

In 1992, after the corporate scandals that took place, was introduced the first Code of Corporate Governance, The Cadbury Code, developed by the London Stock Exchange, in United Kingdom. There are also international principles and here we can mention the OECD Principles, which functions as an orientation guide for both OECD member countries and also for those who are not members of OECD (OECD, 2004).

There is a plenty of definitions regarding corporate governance. So far, the most important is the one of Sir Adrian Cadbury, which said that “corporate governance is the system by which companies are directed and controlled”.

There are many studies regarding the corporate governance committees. Here we can mention a study which examines the remuneration committees for a sample of 220 companies from UK. The results reveal the fact that 30 per cent of them have such a committee (Main and Johnston, 1993). Some authors explore the interest on the board supervision, corporate governance committees, on a sample of Fortune Global 250 companies and the results shows that the detailed disclosures are not common. (Kolk, 2006). Other article shows the divergences between the corporate governance committees in France, the Netherlands and the UK. (Karel 2002)

There is an interest to develop a study about committees, for both researchers and companies.

According to Bucharest Stock Exchange, the Audit Committee and the internal auditor should regularly provide the members of the board with information. According to Rec. 27 of Bucharest Stock Exchange: The board should establish an audit committee, from among its members, to assist in the discharge of its responsibilities in the areas of financial reporting, internal control and risk management. Until an audit committee has been set up, the board should deal with these tasks and responsibilities, in close collaboration with the internal and external auditors; to this purpose the Board should meet at least twice a year with the internal and external auditors to discuss issues connected with financial reporting, internal control and risk management. Rec. 28 : The board or, where relevant, the audit committee, should regularly examine the effectiveness of the financial reporting, internal control and risk management system adopted by the company; it should make sure that the audits carried out and the subsequent audit reports conform to the audit plan approved by the board or the audit committee. Rec. 29 : The audit committee should be composed exclusively of non-executive directors; it should contain a sufficient number of independent directors Rec. 30 : The audit committee should meet as often as it deems necessary, but at least twice a year, when it will deal with the half-yearly and yearly results and their disclosure to the shareholders and the public. Rec. 31 : The audit committee should assist the board in monitoring the reliability and integrity of the financial information provided by the company, in particular by reviewing the relevance and consistency of the accounting standards applied by the company (including the consolidation criteria). Rec. 32 : The audit committee should be informed of the external auditor’s work program and receive a report from the auditor describing all existing relationships between the external auditor on the one hand and the company and its group on the other hand. The audit committee should make recommendations to the board regarding the selection, appointment, reappointment and removal of the external auditor and, in addition, the terms and conditions of their remuneration. It should monitor the independence and

objectivity of the external auditor, in particular by monitoring the rotation of the partners of the audit firm. According to Bulgarian Code for Corporate Governance, Corporate boards, assisted by the Audit Committee and in accordance with the established professional standards and requirements, present in writing at the General Shareholder Meeting a motivated proposal for the selection of an external auditor. The principle of rotation should be applied in selecting and appointing an external auditor. The company should develop and implement an internal control system which should also ensure the early identification of any material risks the company may face and to effectively manage those risks. Such system should ensure also the effective functioning of the reporting and disclosure of information systems. Budapest Stock Exchange stipulates that the audit committee will usually have 3 to 5 members, mainly or wholly independent directors, who will meet at least four times a year.

According to Article 6 of the Corporate Governance Code of Bucharest Stock Exchange, the Board should establish a Remuneration Committee from among its members. The Remuneration Committee should be composed exclusively of non-executive directors and it should contain a sufficient number of independent directors. According to Rec. 21 of Bucharest Stock Exchange: The board should establish a Remuneration Committee from among its members, to assist in formulating a remuneration policy for directors and managers and it should define the committee's internal regulations. Until a Remuneration Committee has been set up, the board should deal with these tasks and responsibilities at least once a year. The remuneration policy shall be subject to AGM approval directors; it should contain a sufficient number of independent directors. The board should ensure that the Remuneration Committee has access to the necessary skills to effectively fulfill its role. The Remuneration Committee may seek assistance from external experts for the fulfillment of its duties, on issuer's account. Rec. 23 : The Remuneration Committee should submit proposals to the board regarding the remuneration of directors and managers, ensuring that these proposals are in accordance with the remuneration policy adopted by the company. The remuneration of non-executive directors should be proportional to their responsibilities and the time devoted to their functions. directors; it should contain a sufficient number of independent directors. The board should ensure that the remuneration committee has access to the necessary skills to effectively fulfill its role. The remuneration committee may seek assistance from external experts for the fulfillment of its duties, on issuer's account. Rec. 23 : The remuneration committee should submit proposals to the board regarding the remuneration of directors and managers, ensuring that these proposals are in accordance with the remuneration policy adopted by the company. The remuneration of non-executive directors should be proportional to their responsibilities and the time devoted to their functions. Rec. 24 : The company should disclose its remuneration policy in its CG Charter. The total amount of direct and indirect remuneration received by directors and executive managers by virtue of their position should be disclosed in the annual report; a distinction should be made between the fixed and the variable components of this remuneration. Regarding the Remuneration Committee, the Corporate Governance Recommendations of Budapest Stock Exchange by the general meeting (or on the basis of authorisation by the general meeting, the Managing Body) should set up a Remuneration Committee from the members of the Managing Body, which assists in outlining the principles of the remuneration of the members of the Managing Body, the

Supervisory Board and the executive management. Related to the conditions of non-executive and independent members of this committee, it is suggested that the Remuneration Committee consists exclusively of non-executive members of the Managing Body (2005/162/EC App. I. 3.1.2.) and the majority of the members of the Remuneration Committee should be independent (2005/162/EC App. I. 3.1.2.) Corporate Governance Recommendations prepared by Corporate Governance Committee of the Budapest Stock Exchange Company Limited by Shares: R 3.4.1. The general meeting (or on the basis of authorization by the general meeting, the Managing Body) should set up a Remuneration Committee from the members of the Managing Body, which assists in outlining the principles of the remuneration of the members of the Managing Body, the Supervisory Board and the executive management. R 3.4.2. The Remuneration Committee should make a proposal for the system of remuneration of the Managing Body, the Supervisory Board and the executive management (individual level and structure of fees), and carry out a review, ensuring adequate structure and transparency. (2005/162/EC App. I. 3.2.) No member of the Managing Body may participate in formulating a suggestion on his own remuneration. R 3.4.3. The Remuneration Committee should prepare proposal packages for the Managing Body, to be discussed and approved, in the case of the executive management, by the Managing Body, in the case of the Managing Body, by the general meeting. It is the task of the Committee to exercise control over the system of share options, cost reimbursements and allowances (agreements on pensions, severance pay) contained in the remuneration of the Board members and the members of the executive management. (2005/162/EC App. I. 3.2.) E When making its proposals, the Remuneration Committee takes into consideration the performance of the company and the individual, in the case of Board members and members of the executive management, other possibilities for fulfilling the given position, as well as remuneration applied by other companies. The Remuneration Committee formulates remuneration guidelines and benchmarks and it controls their implementation. R 3.4.4. In addition to remuneration guidelines and proposals on the remuneration of given individuals, the Remuneration Committee should also deal with the terms of agreements concluded with members of the executive management, and ascertain whether the company has fulfilled its publication obligations regarding issues of remuneration. (2005/162/EC App. I. 3.2.) S 3.4.5. The Remuneration Committee should prepare a Remuneration Statement to be published annually. ("Remuneration Statement" – 4.1.11.) (2005/162/EC App. I. 3.2.) S 3.4.6. It is suggested that the Remuneration Committee consists exclusively of non-executive members of the Managing Body. (2005/162/EC App. I. 3.1.2.) R 3.4.7. The majority of the members of the Remuneration Committee should be independent. (2005/162/EC App. I. 3.1.2.) R 3.5.1. When setting up the committees, the Managing Body may decide that the duties of the Nomination Committee and the Remuneration Committee will be executed by one (merged board) committee. In this case, an explanation should be given as to the causes of the decision, and it should be indicated how, according to the Managing Body, the committees, with a reduced number of members, will be able to achieve the general goals of two (remuneration and nomination) committees. (2005/162/EC 7.1.) R 3.5.2. In the case of a small number of members, the Managing Body may carry out the duties of the Nomination and Remuneration Committees, if it meets the requirements regarding the composition of the given committee and provides adequate information on this. (2005/162/EC 7.2.) In order to assist directors to properly shoulder their

responsibilities and be in a position to inform shareholders knowledgeably about activities of their company it is recommended that Boards include the adoption of committees which review the audit, nomination and remuneration functions of the company. The establishment and functioning of each of these three committees should follow an unemotional style and consequently it is better that they are composed mainly, if not wholly, by independent directors. The Remuneration Committee usually has 3 to 5 members, mainly or wholly independent directors, who meet annually but may need ad hoc sessions as well. Code of Best Practices of Warsaw Stock Exchange has no information related to Remuneration Committee. The recommendations of OECD Principles from 2004 for Prague Stock Exchange: the Board shall appoint Nomination Committee and Remuneration Committee among from its members.

In the principle X of Article 5 of the Corporate Governance Code of Bucharest Stock Exchange it is stated that the Board of Directors shall evaluate whether to establish among its members a Nomination Committee made up, mainly, of independent directors. According to Bucharest Stock Exchange, The Board of Directors shall evaluate whether to establish among its members a Nomination Committee made up, mainly, of independent directors. According to Rec. 19 of Bucharest Stock Exchange: Where established, the Nomination Committee should lead the process for board appointments and make recommendations to the board to propose candidates for the position of director. Rec. 20 : The Nomination Committee should evaluate the balance of skills, knowledge and experience on the board and, in the light of this evaluation, prepare a description of the role and capabilities required for a particular appointment. In the third chapter of the Corporate Governance Recommendations of Budapest Stock Exchange it is stated that the general meeting (or on the basis of authorisation by the general meeting, the Managing Body) should set up a Nomination Committee from the members of the Managing Body, which assists in selecting members for the Managing Body, the Supervisory Board, and the Chief Executive Officer. In the same Recommendations it is suggested that the majority of the members of the Nomination Committee are independent. (2005/162/EC App. I. 2.1.2.) R 3.3.2. The Nomination Committee should ensure the preparation of personnel changes with the aim that the replacement of a Managing Body member leaving due to retirement, resignation or any other reason, or the succession of members of the executive management is carried out smoothly, with the company's work continuing uninterrupted. The Nomination Committee examines the practice of the Managing Body for selecting and appointing members of the executive management, assesses the performance of members of the Managing Body, the Supervisory Board, and the executive management (and the suitability of candidates). The Nomination Committee examines all suggestions relating to the nomination of Board members which are submitted by the shareholders or the Managing Body. E The Nomination Committee's main task is to prepare informed and objective suggestions to the shareholders on the nomination for membership of the Managing Body and the Supervisory Board (appointment, dismissal). The purpose of the Committee's operation is to ensure that members of the Managing Body and the Supervisory Board possess adequate qualifications and professional experience to perform their duties in the best interest of shareholders. As part of company strategy those persons who have the capacity to substitute or replace appointed managers and members of the Managing Body shall be specified. Preparation for personnel changes also includes the identification of employees with

outstanding performance, and the planning of their careers within the company. For the sake of the above, when judging the suitability of candidates, the Nomination Committee should not only take into consideration business and personal relations, but also examine the candidate's competence, professional ability, and estimate whether the candidate is capable of devoting enough time to carry out his duties as a Board member. (2005/162/EC App. I. 2.2.) It is suggested that the Nomination Committee prepares an evaluation at least once a year for the Chairman of the Managing Body on the operation of the Managing Body, and the work and adequacy of the members of the Managing Body. S 3.3.4. It is suggested that the majority of the members of the Nomination Committee are independent. (2005/162/EC App. I. 2.1.2.) S 3.3.5. The Nomination Committee's rules of procedure should give details of the criteria used for the appraisal of nominees. In addition to the provisions of current Hungarian laws and regulations, these criteria should cover membership of the Boards' and committees' of other companies, the degree of the nominees' independence, and their experience acquired. The Nomination Committee usually consists of 3 to 5 members, mainly or wholly independent directors, who meet as required. Code of Best Practices of Warsaw Stock Exchange has no information related to Nomination Committee. The recommendations of OECD Principles from 2004 for Prague Stock Exchange state that the Board shall appoint Nomination Committee and Remuneration Committee among from its members.

## **2. Sample Selection and Methodology**

In our demarche we start from choosing the emerging economies from European Union. So, our sample is consisting of the companies listed on Bucharest Stock Exchange, Sofia Stock Exchange, Warsaw Stock Exchange, Prague Stock Exchange, Budapest Stock Exchange, no matter what tier. Because we want to have a heterogeneous sample, we have eliminated the financial institutions from our research. This study is developed at European Union level and takes into consideration some indices, like: BET® BUCHAREST EXCHANGE TRADING (Romania), SOFIX (Bulgaria), WIG 20 (Poland), PX (Czech Republic), BUX The Share Index of the Budapest Stock Exchange Co. Ltd. (Hungary). BET, the first index developed by BVB, is the reference index for the Bucharest Stock Exchange (BVB) market. BET is a free float weighted capitalization index of the most liquid 10 companies listed on the BVB regulated market. SOFIX is an index based on the market capitalization of the included issues of common shares, adjusted with the free-float of each of them. WIG20 index has been calculated since April 16, 1994 based on the value of portfolio with shares in 20 major and most liquid companies in the WSE Main List. The initial value of WIG20 index was 1000 points. It is an price index and thus when it is calculated it accounts only for prices of underlying shares whereas dividend income is excluded. The WIG20 index may not include more than 5 companies from a single exchange sector. PX is the Price Index of blue chip issues. The BUX index is the official index of blue-chip shares listed on the Budapest Stock Exchange Ltd. It is calculated in real time by the BSE every five seconds based on the actual market prices of a basket of shares. The index shows the average price changing of the shares with the biggest market value and turnover in the equity section. Hereby this is the most important index number of the exchange trends. The data are extracted from the Annual Reports, Corporate Governance Codes, Comply

or Explain Statement or the websites of the listed companies, from period 2007-2011. We choose this period, because we wanted to see the evolution of the corporate governance committees' implementation from the period when the last countries from our sample joined the European Union since nowadays. There are 44 companies in our sample. The period analyzed is between 2007- 2011. We did not excluded the banks and other financial institutions from our sample, even if they have special regulations, but we must excluded the companies that do not have the complete information or that ones that do not have published it. So, our final sample consists of 37 companies.

**Table 1** The Sample Selection

<b>Selection criteria</b>	<b>Total</b>
Bucharest Stock Exchange	5
Sofia Stock Exchange	7
Warsaw Stock Exchange	15
Prague Stock Exchange	11
Budapest Stock Exchange	6
<b>Total companies</b>	<b>44</b>

Source: The authors (based on the research)

We purpose in our demarche to analyze through the present study up to 35 criteria: 11 criteria (for the Audit Committee), 8 criteria (for the Remuneration Committee), 8 criteria (for the Nomination Committee), 8 criteria (for the Compensation Committee). The paper is organized as follow: it has an introduction, a section which consists in the literature review regarding the corporate governance and corporate governance committees, a section that describes the sample selection and the methodology aspects, a section that disclose the aspects related to our study, its components and the section that draws some conclusions.

### 3. **Research and Results Regarding Committees**

#### *Prague Stock Exchange*

From the eleven companies out of our sample, eight (72%) have an Audit Committee through the analyzed period, with the minimum of seven companies in year 2008 and the maximum of nine companies in 2011. Between 2007-2010, only three companies (27%) had a Nomination Committee and a Remuneration Committee, while in 2011 the number of companies having these two committees increased with 10 %. Related to the Compensation Committee, there was a single company that has established it, which means that only one of the ten analyzed companies considered this committee to be necessary.

#### *Budapest Stock Exchange*

Out of the six companies of our sample, all of them had an Audit Committee through the analyzed period, fact that leads us to the conclusion that for the companies listed on the Budapest Stock Exchange, the establishment of an Audit Committee is very relevant. Related to the Nomination Committee, only one company out of the six

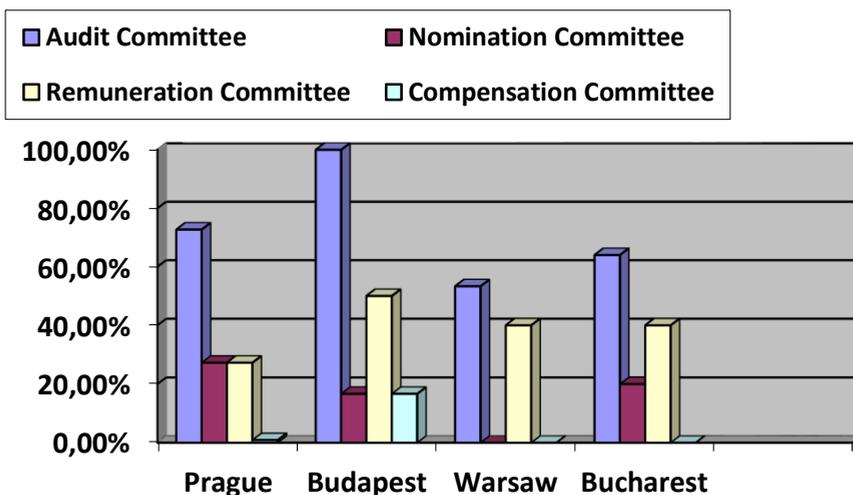
ones had established this support committee, while half of them had established a Remuneration Committee. When analyzing the existence of the Compensation Committee, we have discovered that only one company has established this consultative committee.

*Warsaw Stock Exchange*

From the fifteen companies of the Warsaw Stock Exchange sample, in medium, eight companies (53,33%) had an Audit Committee through 2007-2011, with six companies (40%) in 2007 and eleven (73,33%) in 2011. None of the studied companies had an independent Nomination Committee, but three of them (20%) had a Nomination and Remuneration Committee. Related to the Remuneration Committee, in medium, six companies (40%) of the selected sample had established this committee, with a minimum number of four companies in 2007 and the maximum number of seven companies in 2010 and 2011. None of the companies had through the analyzed period a Compensation Committee.

*Bucharest Stock Exchange*

Out of the five companies which formed the sample, in medium, 3.2 had established an Audit Committee, leading to a percentage of 64 % companies which had an Audit Committee in the analyzed period. Through 2007-2011, only one company (20%) out of the five ones that formed the sample for Bucharest Stock Exchange had a Nomination Committee, while two companies (40%) had established a Remuneration Committee. As in the case of Warsaw Stock Exchange sample, none of the selected companies had a Compensation Committee.



**Figure 1** The presence of the four Committees in the selected sample

As it can be seen in the figure above, the companies listed on the Budapest Stock Exchange have in proportion of 100% an Audit Committee, being followed by those from Prague, Warsaw and finally Bucharest Stock Exchanges. Analyzing the existence of the Nomination Committee, we can observe that the highest number of

Source : The Authors

companies which have established this committee is from Prague Stock Exchange, followed by Budapest, Bucharest and last Warsaw companies. The Budapest Stock Exchange sample of companies comprise the highest number of entities which have a Remuneration Committee, while the sample from Prague Stock Exchange scores the lowest in terms of companies which have established a Remuneration Committee. Again the sample from the Budapest Stock Exchange scores the highest in terms of companies which have a Compensation Committee, being closely followed by Prague sample, while the companies listed on the Warsaw and Bucharest Stock Exchanges did not establish a Compensation Committee.

#### *Prague Stock Exchange*

In terms of Audit Committee size, the number of members oscillated from 3.11 in 2011 to 3.28 in 2008, the medium number of members for the 2007-2011 period being 3.21. Related to the Nomination Committee size, between 2007-2010, the number of members staid constant at 3.66, reaching 3.5 in 2011 with a medium number of 3.63. The members of the Remuneration Committee remained constant along the analyzed period, with the number of 3 members. In terms of Compensation Committee size, the number of members composing this committee was 3.

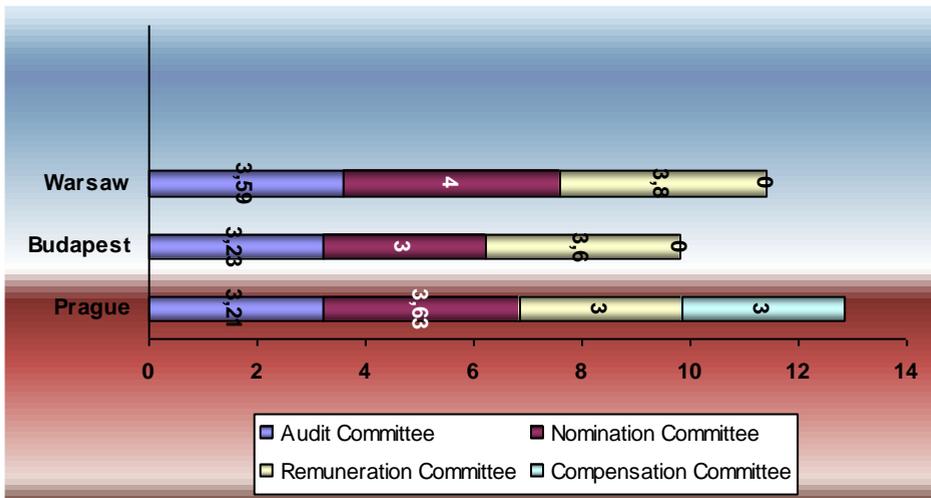
#### *Budapest Stock Exchange*

Between 2007-2009, the number of Audit Committee members reached the value of 3.17, increasing both in 2010 and 2011 at 3.33 members, with a medium number of 3.23 members along the analyzed period. The Nomination Committee size remained constant along 2007-2011 with a number of 3 members. The Remuneration Committee had in 2007 3.33 members, increasing until it reached 3.67 members for the next analyzed years, leading to a 3.6 medium number of its members.

#### *Warsaw Stock Exchange*

When taking into account the Audit Committee size, it can be stated that the maximum number of members was 4 in 2007 with the lowest number of 3.5 members in 2010. Still, the medium number of Audit Committee members was 3.59, while the medium number of the Nomination Committee size was 4 along the period 2007-2011. The medium Remuneration Committee size was 3.8 members with 3.75 members in 2007 and 2008, increasing slowly to 4 members in the next two years.

**Figure 2** The four Committees size



Source : The Authors

Analyzing the graphic above, the companies listed on the *Warsaw Stock Exchange* have the highest number of Audit Committee members, as well as Nomination Committee members and Remuneration Committee.

On *Prague Stock Exchange* company sample, one of the analyzed companies has a Nomination and Remuneration Committee consisting of 5 members, out of which 3 are non-executive throughout 2007-2011. In 2011, another company has established a Nomination Committee composed of 3 members, 2 non executive, 1 independent and independent chairman. For the other companies which had a Nomination Committee, there were no information available related to non executive and independent members. Regarding the Remuneration Committee, there was a company with a Remuneration Committee consisting of 3 members, out of which 2 were non executive and independent without independent Chairman.

On *Budapest Stock Exchange* company sample, one company has a Corporate Governance and Nomination Committee consisting of 4 members, all of them being non executive and independent, with independent chairman. For the rest of the companies, there were no information available related to non executive and independent members.

On *Warsaw Stock Exchange*, one company had a Remuneration and Nomination Committee consisting of 3 members, with 1 non executive and 2 independent ones, another one had a Remuneration and Nomination Committee consisting of 5 members, with 4 non executive ones. Another company had a Remuneration Committee formed of 4 members with 3 non executive, 1 independent member and independent Chairman, while another two companies that have established a Remuneration Committee, were both characterized by a number of 3 members with 2 non executive ones.

#### 4. Conclusions and Recommendations

By far our motivation when we started our demarche was to increase the confidence of all stakeholders in the quality of financial reporting and to promote and encourage organizations to develop good corporate governance practices. Like we stated before, the literature emphasizes a variety of reasons to study these sensitive aspects. One of the major outcomes of the process of corporate governance is to increase the stakeholders` confidence in the company`s practices of financial reporting and governance, fact that lead us to analyzing the existence and characteristics of the support committees for our selected sample. Although we have focused on emerging economies and we expected weak transparency practices, it does not mean that these analyzed aspects are not important, moreover, their importance is increased in these markets and the role of corporate governance practices is even greater in emerging economies in more developed markets. Even though in the selected economies the Codes of Corporate Governance specifically points the existence and characteristics of the support committees, after conducting our analyze, we can state that most of the companies do not comply with these requirements, their non-complying decision varying from case to case. Our conclusion is that we can not discuss about good corporate governance practices. Even so, we can observe from our investigation that the trend in this regard is encouraging. Like future research, we thought at developing our study by comparing the emerging economies from European Union with those outside this area. It is an interesting area of investigation, as every country has different regulations.

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## Appendix

No.	The Stock Exchange	The Companies
1	Bucharest Stock Exchange	OMV Petrom SA
2		SNTGN Transgaz SA
3		CNTEE Tranelectrica
4		Biofarm SA
5		Electromagnetica SA
6	Sofia Stock Exchange	Sopharma AD
7		Bulgartabac Holding
8		Monbat AD
9		M+S Hydraulic
10		Albena
11		Kaolin AD- Senovo
12		Zarneni Hrani
13	Warsaw Stock Exchange	Assecopol
14		Boryszew
15		Eurocash
16		Globe Trade Centre
17		JASTRZĘBSKA SPÓŁKA WĘGLOWA SA
18		Kernel Holding SA
19		KGHM Polska Miedz SA
20		Lotos - GRUPA LOTOS SPÓŁKA AKCYJNA
21		Bogdanka - LUBELSKI WĘGIEL BOGDANKA SPÓŁKA AKCYJNA
22		Polska Grupa Energetyczna SA
23		PKNIG - POLSKIE GÓRNICTWO NAFTOWE I GAZOWNICTWO SPÓŁKA AKCYJNA

<b>No.</b>	<b>The Stock Exchange</b>	<b>The Companies</b>
24		PknOrlen- POLSKI KONCERN NAFTOWY ORLEN SPÓŁKA AKCYJNA
25		Synthos SA
26		TAURON POLSKA ENERGIA SPÓŁKA AKCYJNA
27		TELEKOMUNIKACJA POLSKA SPÓŁKA AKCYJNA
28	Prague Stock Exchange	CEZ
29		Telefónica Czech Republic
30		Unipetrol
31		New World Resources
32		Philip Morris CR
33		PEGAS NONWOVENS SA
34		Orco Property Group S.A.
35		CENTRAL EUROPEAN MEDIA ENTERPRISES LTD.
36		Tatry mountain resort
37		Fortuna Entertainment Group N.V
38		AAA Auto Group N.V.
39	Budapest Stock Exchange	EGIS Pharmaceuticals Public Limited Company
40		MOL Hungarian Oil and Gas Public Limited Company
41		Magyar Telekom Telecommunications Public Limited Company
42		PannErgy
43		Gedeon Richter Plc.
44		Synergion information Systems plc

# SOME CONSIDERATIONS REGARDING THE MANIFESTATION OF FISCAL FRAUD IN ROMANIA

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**Abstract** *In our paper we shall try to present two mechanisms of fiscal fraud used by economical agents and also found in the control actions performed by the fiscal organs at different commercial societies from Romania. The presented mechanisms refer to the fiscal fraud resulted from fictitious acquisitions of goods and services done by Romanian firms which have as beneficiaries other commercial societies which are fiscally registered in Romania. Being empirically examined, the fiscal fraud will be presented through the use of some figures which will describe the detailed operations step by step. For the cases we have chosen to present we will describe the real circuit of goods and money according to the documents. We will also refer to the possibility of identifying the risk of fiscal fraud that results from the reports provided by the economic agents for different state institutions. We will also consider the information provide by the books of prime entry and bookkeeping, documents which have to be written by the commercial societies according to the Law accountancy nr. 82/199, with further modifications and completions. The mechanisms of fiscal fraud in use can be identical with the ones presented in this paper or they can be different as „new elements” can appear; these „new elements” depend on the type of activity performed, the modifications the legislative framework, the performers’ creativity or other external or internal factors which are not identified by the fiscal organs. By identifying the fiscal fraud mechanisms and the way in which they function, the fiscal organs will be given the opportunity to take the necessary measures so that the fiscal resources of the state consolidated budget should not be affected by such operations. It is will known that we can speak of fiscal fraud and shadow economy in any country but ,according to the reports and statistics published by different international institutions, Romania’s shadow economy represent almost 30% from the Gross Domestic Product. The Romanian authorities should carefully think about this phenomenon as it requires strict measures to reduced it.*

**Keywords:** *fiscal fraud, mechanisms, control, fiscal organs, fiscal resources*

**JEL classification:** *H 26*

## **Introduction**

The tax payers creativity „to diminish” the fiscal obligations which have to paid to the consolidated state budget is beyond imagination as the tax payer considers his personal interest over the general one. The diminution of the fiscal obligations in Romania can be regarded from two perspectives: one subjective and the other more objective. *The subjective component* implies that the person who chooses not to pay the fiscal obligations analyses the risks he is exposed to. If he considers that the result has a minimum level of risk he decides to avoid paying the taxes. According

to *the objective perspective* the present society offers just a few personal examples out of which a fiscal honest behavior is appreciated so that the tax payer could perceive the social benefits returned by the state as a result of his contribution. The avoidance of paying taxes is a consequence of the fact that up to the present moment there haven't been taken measures to correlate the income of a given person with his/her actual expenses in a given period of time although the Governmental Prescript nr.117(2010), was adopted in December 2010. According to this document: "any income identified by the fiscal organs, under the conditions of the Code of fiscal procedure, income with an unidentified source requires a 16 % quota applied to the adjusted taxable basis according to the indirect procedures and measures of reconstructing incomes or expenses".

### ***The fiscal fraud regarding the source of goods or their fictitious consumption***

In his mission letter addressed at Bruxelles by the Chairman of the European Commission, José Manuel Barroso (2009), refers to the efficient European and international fight against fiscal fraud in the mandate of the designated commissioner (Algirdas Šemeta) for taxation, customs union, audit and anti-fraud in the period 2010-2014. According to the action plan for an efficient fight against tax evasion and fiscal fraud presented at Bruxelles commissioner Algirdas Šemeta (2012) stated that: „approximately one thousand billion Euro are annually lost in EU because of the tax evasion and fiscal fraud. This sum of money is not just an outrageous lost of useful income, but also a threat to fair taxation. Among the measures recommended in the action plan there is one that mentions that all the member states should be encouraged to adopt a basic rule according to which: „they could ignore any artificial agreement set in order to undergo the fiscal fraud and establish taxes on the basis of the actual economic activity.”

The British lawyer, Templeman (2001), stated: "A tax avoidance scheme includes one or more interlinked steps which have no commercial purpose except for the avoidance of tax otherwise payable, and can conveniently be described as artificial steps. A tax avoidance scheme does not leave the taxpayer any better or worse off but leaves the Revenue worse off". According to the information provided in the European Parliament by the tax researcher Murfy (2012), Romania annually loses over 10 billion Euro from the manifestation of the shadow economy.

Starting from here we shall present in detail two mechanisms of fiscal fraud by which the participants simulate operations of acquisition and trading goods and services, the only real purpose being that of avoiding the payment of the fiscal obligations and the desire to create a certain pretended legality for the operations mentioned in the documents.

The two mechanisms of fiscal fraud are based on real cases which have been analysed by one of the authors during his everyday activity as a Financial Guard commissioner. Such cases are often found in the activity fields of different commercial societies: trade, production, domestic services and constructions.

The main purpose of this paper is „to sensitize” all the decisional factors with responsibilities in the economical field since all the sums of money resulted from such operations are huge according to the information held by the Public Finance Ministry. According to the research performed by the authors, there have been identified cases when thousands of commercial societies declared, through 394 form, acquisitions of goods and services whose value worth millions Euro. Such

acquisitions are made from only one supplier even though he is not aware of them and he has not declared deliveries to those clients. The only purpose of declaring these as acquisitions is to create a source to the suppliers. In many cases „the final beneficiary” is the state and consequently the value of different works is increased without a real support and the state budget is prejudiced.

The presented fiscal fraud schemes are widely spread on the Romanian territory; these schemes are made of different links which are presented in detail in Figure nr. 1 „Fiscal fraud when the beneficiary fictitiously introduces in usage different goods to obtain some fiscal advantage” and in Figure nr. 2 „Fiscal fraud when the beneficiary has different goods for which he doesn't have legal documents”

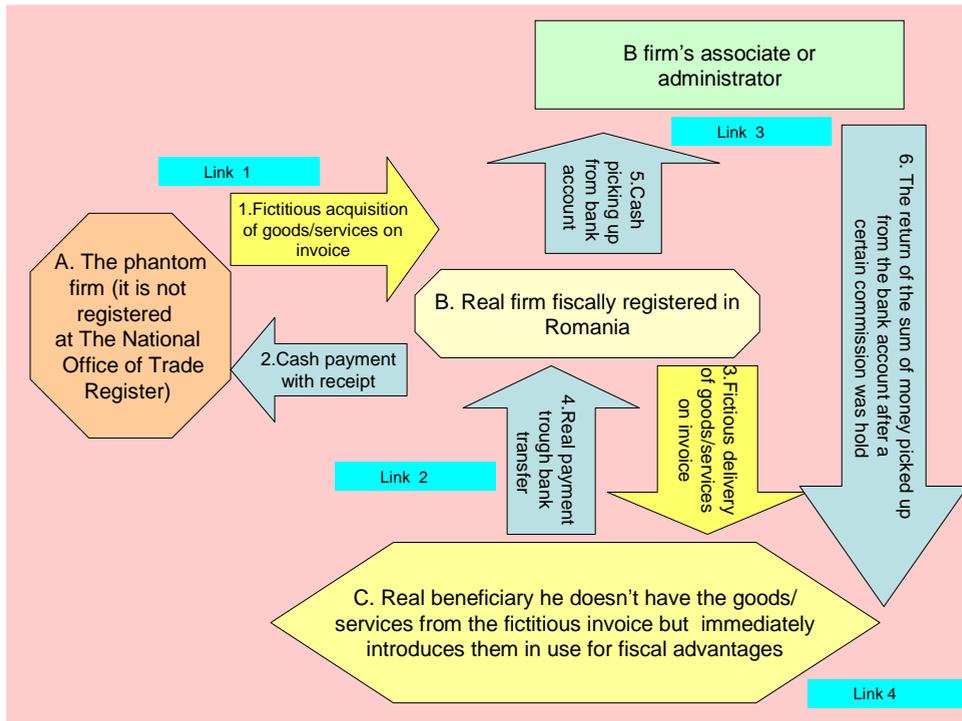


Figure nr. 1 „Fiscal fraud when the beneficiary fictitiously introduces in usage different goods to obtain some fiscal advantage”

Source: the author

*Link 1 – fictitious acquisition of goods and services and unreal payment using a receipt*

- the firms fiscally registered in Romania realizes fictitious acquisitions of goods and services based on invoices from phantom firms which don't function at the declared address, may be erased from the evidence N.O.T.R. or the firm's administrators can't be reached;
- the cash payment of the suppliers is done by using a receipt, exceeding the limit of payment imposed for juridical persons by the Governmental Order

nr.15/1996, with modifications; in this case the establish limit is of 5.000 lei/juridical person/day

*Link 2- unreal delivery of goods and services by using false invoice and real payment through bank transfer*

- the goods and services fictitiously acquired are now traded using fictitious invoices from firms which are registered in Romania and effectively function at the social centre or the fiscal residence.

The two fraud mechanisms can be differentiated according to the purpose and implications they create at the beneficiary of goods and services:

-in the first case, presented in the Figure nr.1 „Fiscal fraud when the beneficiary fictitiously introduces in usage different goods to obtain some fiscal advantage”, the goods and services are neither delivered by the supplier, nor do they exist at the beneficiary the whole operation having as the main purpose the diminution of the fiscal obligations as well as the removal of sums of money from the beneficiary’s firm.

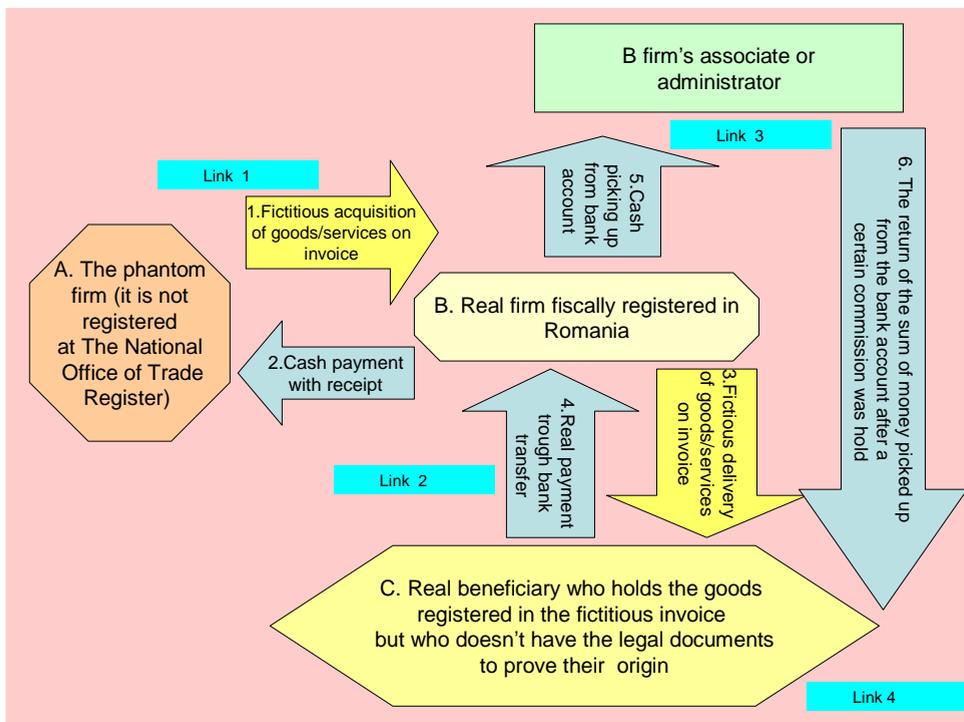


Figure 2 „Fiscal fraud when the beneficiary has different goods for which he doesn't have legal documents”

Source: the author

- in the second case presented in Figure nr. 2 „Fiscal fraud when the beneficiary has different goods for which he doesn't have legal documents”, the

goods and services are not delivered by the supplier but the beneficiary needs some legal documents to prove their origin. When it comes to services, these have been performed for the beneficiary by a different supplier who is not mentioned in the documents so that the final beneficiary has documents from another supplier who has not really performed the services. The fundamental difference between the two mechanisms resides in the fact that in the second case, for a certain good that really exists, the beneficiary gets a document to prove its origin and this document „demonstrates” his property right.

- the payments to the supplier firms which have provided fictitious invoices are done by the beneficiary firms „of the documents” through bank transfer; these payments try to provide a veil of legality to the operations

*Link 3 – the effective cash withdrawal from the bank account by the administrator or associate of B firm; the sum of money which is withdrawn is equivalent to the invoice value minus the bank’s commission;*

- in order to withdraw the sums of money resulted from operations that have not been really performed and to enable the beneficiary firm of the documents to take back the money paid for „documents”, the bank is informed by the firm who provides the fictitious invoices that the sums of money are withdrawn to perform operations with natural persons; the sums of money are needed for „the acquisition of scrap”, „copper” or even „salaries”; these operations are not under strict limit imposed by GO 15/1996, being considered exceptions (according to the given GO, a firm can withdraw up to 10.000 lei/day cash from the bank account).

*Link 4 – B firm’s administrator returns in cash the value of the invoice after he has held a commission; the cash is paid to the C firm’s administrator*

- later „the documents’ beneficiary” retrieves in cash the sums of money paid through bank account to the “supplier” after he has paid a commission between 2 and 10% from the operations’ value. These operations also result from the account extracts of B firm out of which we can observe that between the moment of cash collection through bank transfer to B firm from C firm and the moment of cash withdrawal by the B firm’s administrator there is a short period of time reduced to several minutes.

The fiscal implications of such operations consist in:

- the diminution of the obligations for VAT payment at the beneficiary firm;
- the diminution of the obligation for paying the profit tax at the beneficiary society;
- the attempt to confer a veil of legality for the withdrawal of different sums of money from the beneficiary firm by an associate or administrator.

The fictitious character of the operations also results from the fact that:

- the firms which provide „documents” don’t possess any means of transport, inventory objects or any other fixed means;
- they haven’t got any employees;
- for the reporting periods, the mentioned firms register losses in order not to pay a profit tax, so from economic point of view owning such a firm is not profitable;
- the firms are registered as VAT payers but in fact they don’t do that and moreover ,at the end of the reporting period, the state has to give them the VAT back;

- the associates introduce big sums of money in the firms but they can't prove the money's origin.

The identification of the fraud risk results from the information provided by the reporting documents declared by B firm. According to this information we observe that:

- the declared fiscal vector mentions just two obligations: the profit tax and VAT, that leads us to the conclusion that the investigated economic agent doesn't have any employees;

- the economic agent has not declared any working points at the National Office of Trade Register;

- in the annual balance sheet or semestrial reports we can't find any fixed means or, when they are mentioned, their value is insignificant as compared to the volume of activity performed by that firm

- the firm registers huge turnover according to the declarations on profit tax (101 form), without registering any profit or sometimes, when it appears, the profit is very small;

- the firm registers successive VAT deductions (300 form) for the acquisitions of goods and services, which are bigger than the deliveries of goods and services, so that at the end of the fiscal reporting periods the firm has VAT to reclaim from the state budget;

- in the legal papers they fill in, these firms do not put a tick for the option „require VAT return”, even though they would have the legal right to do so but this will consequently prove that their operations are illegal in the case of a fiscal control;

- from the informative declarations regarding the acquisitions and deliveries on the Romanian territory (form 394) made by B firm we identify major discrepancies between the acquisitions reported by B as being done from A firm.

The fiscal fraud also results from the information provided by the accountant evidence of B firm:

- in the accountant evidence we cannot find accounts from the following groups: 20 „Intangible assets”, 21 „Tangible assets”, 23 „On the process assets”, 26 „Financial assets” and group 28 „Depreciations of assets”;

- the value registered in „Total of the -in-the-red and in-the-black sums” for the accounts 37 „Merchandise” are very high; this proves that there is a certain „movement of merchandise stocks” in the sense that there are performed different successive operations for merchandise acquisitions and trading; sometimes at the end of the month there seems to appear a registration of high balance for the merchandise accounts; this demonstrates that the merchandise should be deposited in a warehouse. In order to avoid the registration of a high balance at the end of the month in the account 371 „Merchandise” (which implies the existence of a place where the merchandise is stocked and the presence of the person responsible for this) the firm uses the account in group 35 „Stocks held by others”, out of which we understand that the investigated economic agent doesn't possess the stocks and they are in the custody of another person.

- the values registered in „Total for in-the-black sums” at group 40 „Suppliers and assimilated accounts” and also in „Total for in-the-red sums” at group

41 „Clients and assimilated accounts” are very high; this can be interpreted as great sums of money which have to be paid to the suppliers and received from clients

- we don't identify any sums in the account 441 “Profit tax” or if the sums appear they are very small;

- in the VAT accounts 4426 „Deductible VAT” and 4427 „Collected VAT” big sums of money are registred, even though at the end of the month the account 4424 „VAT to get” shows an in-the-red balance; this proves that the economical agent has a claim from the state budget with the some value;

- the value registered in „Total for in-the-black sums” at gropup 45 „Group and share associates”, account 455 „Sums owed to associates” and group 46 „Debtors and different creditors”, account 462 „Different creditors” are very high because these values try to offer a plausible explanation for the great sums of money brough by the associates or creditors in the firm

- the value registered in „Total for in-the-red and in-the-black sums” at group 53 „Cash” are very high; in this case the debit shows represent the money brought by the associates and creditors while the credit shows the way in which the sums are used for the cash payment of fictitious acquisitions operations;

- the value registered in „Total for in-the-red and in-the-black sums” at group 60 „Stock expences”, group 61 „Expences for works and services performed by other persons”, group 62 „Expences for other services performed by other persons”, group 65 „Other exploitations expenses” are very big;

- there aren't registered sums of money in the accounts from group 42 “Assimilated personnel and accounts” or in the group 64 “Personnel expenses”

- the value registered in „Total sums” at the income accounts from group 70 „Net turnover” and 75 „Other exploitation income” are very big;

- balance of the account of 121 „Profit or loss” is in-the-red or in some cases is in-the-black with the small value reported to the sums of money registered in the income accounts; this demonstrates us that in the given fiscal year the economic agent has registered losses when the balance is in-the-red or profit when balance is in-the-black;

- balance of the account of 117 „Carried forward result” is in-the-red, i.e. the losses caried forward from the previous years; these losses are to be recovered from the next years' profits

## **Conclusions:**

As a general conclusion of this paper we consider that in order to discover and get more informed on fiscal fraud it is crucial to understand first of all the fraud risk to which an economic agent is exposed to. These risks depend on certain characteristics such as: the activity performed, the types of fiscal obligations he has, the flows of the legislative framework which supervise its activity, the ethic profile of the administrator or associate. *The type of activity* performed by the economic agent who is under investigation could be correlated with the average profit rates obtained by other firms which performe the same type of activity or a similar one. If the economical agent obtains profit rates under the average one or even more if he registers losses along several years this must be an alarm signal for starting a fiscal control to that particular economical agent. *The fiscal obligations* declared through the fiscal vector should be correlated with the declarations ofered by the economical agent under investigation. The sums of money registered in the declarations and the reports presented at different state institutions should also be correlated with the

volume of activity and the human and technical capital needed to perform the activity. *The legislative framework and its modifications* also have an important impact on the fraud risk because when the fiscal obligations increase this consequently determines an increase of the fraud risk. We consider that if we want to get a clear picture of the *ethical profile of the administrator or associate* we should consider the sums of money brought by these persons in the firm (through bank account or cash) whether they are considered contribution to the social capital, loan for the firm or other loans. What is more important is to correlate the above sums of money with their source according to the income declarations reported to the fiscal organs. We mention that according to the the latest legislative changes The Code of Fiscal Procedure (2013) stipulates that a natural person who is under investigation for income tax has the obligation to make a statement to the fiscal organ with reference to his possessions and incomes. We mention that the possessions and incomes which have to be declared by the investigated person are to be detailed in a new document which is to be released by the Public Finance Ministry in the coming months.

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## INNOVATION IN THE CREATIVE INDUSTRIES – CASE STUDY OF AN EVENT PLANNING COMPANY

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**Abstract:** *Creative industries have recently gained attention from economists and policy makers as they are said to contribute in a significant way to the economic and technological development of knowledge societies. In Romania there has not been too much talk about the way in which these industries are inserted in the larger chain of industrial innovation, nor about the particularities of their innovation processes which could provide interesting insights for the more traditional industries that are in need of a creativity boost. This paper seeks to fill this gap by offering a process view of business innovation in an event management company, which we argue has many of the characteristics encountered in organizations belonging to creative industries. Through an in-depth case study based on diary entries and interviews we uncover the way in which innovation is understood in this service sector and how this understanding is translated into repeatable business processes. Based on the review of the literature concerned with innovativeness in creative industries we have decided upon four important research themes: people, products, places and policies. By people we refer, first of all, to the entrepreneur who was asked to reflexively answer questions related to passions/interests, formal and non-formal knowledge and social capital in order to assess her entrepreneurial capacity for innovation. Also included in this category are the clients and the employees, which represent major players in the innovation process during different stages. Places are important because they are used in the definition of innovation: something new to someone somewhere, and also because they are regarded as a source of inspiration and a possible hindrance in the implementation of the desired event design. Products encompass the raw materials that are used in creating the flower arrangements and the general room décor as well as the technologies that stand behind them, while policies refer to national or local governmental mechanisms that seek to guide and fund innovation. These categories represent (f)actors that bring important contributions to the innovation process, while at the same time representing sources of major business risks for the event management company. The article follows the way in which these four items interact during the innovation process which was split into four stages: idea generation, negotiation of the idea, preparations for implementation and implementation of the idea. We conclude with the observation that innovation in event planning is human centered, the main referential system being based on the dyad company-client, a thing which has not been explicitly researched until now. Also we suggest that before trying to understand the way in which companies innovate, it is critical to undergo a thorough assessment of the entrepreneurs' perception of business risks.*

**Keywords:** *innovation; floral design; creative industries; small and medium enterprise; risk; entrepreneurship.*

**JEL classification:** M19; O31.

## **1. Innovation and Event Planning in the Framework of Creative Industries**

Creative industries are defined based on two criteria: creativity as an input and content or intellectual property as the output (Galloway and Dunlop, 2007). Nowhere in the literature regarding creative industries have we been able to find explicit references to event planning companies, and in this paper we argue that this service sector should be taken into consideration when analyzing creative industries. We also contend that studies of innovativeness in this sector benefit from the scientific findings published in the researches referring to innovation in creative industries.

Events are like theatre shows in the fact that there is only one chance to make everything right and then the experience is over and it won't be recreated in the same way ever again. These fleeting but powerful experiences are what event planners sell. Planning an event such as a wedding, baptism, funeral or a corporate Christmas party involves a blend of traditions and innovation that has to perfectly fit the requirements of the clients. Considered a standard of creativity because what she creates is the materialization of an idea or a dream, the designer is trying to make beautiful and useful objects, transmitting aesthetic emotions.

There are four prominent themes that are featured in the literature regarding innovation in creative industries: people, places, products and policies, and we will briefly present the main findings of previous research during this section to pick the categories then as research areas.

The locus of innovation in creative industries is both very close to the market and distributed inside a network of actors that contribute to the final product or service. Companies in creative industries have at their disposal multiple avenues for allowing clients to participate in the innovation process: (a) opening up the company's boundaries, (b) opening the product/service for co-creation, and (c) organizing identity convergence around products or services (Parmentier and Mangematin, 2012). Besides clients, companies in creative industries also work with project-based networks built on informal patterns of interaction which tend to repeat themselves in a series of projects and create semi-permanent ties (Daskalaki, 2010). These networks of collaborators are also quite mobile and fluid, reflecting the patterns of organizational learning as well as the socio-cultural developments in the industry (Daskalaki and Blair, 2003).

Place bears a significant importance in the study of creativity in these industries, as authors talk about clusters of creative enterprises (Lazzeretti, Boix and Capone, 2008) which make for vibrant creative cities (Hubbard, 2006; Hall, 2000) or rural settlements (McGranahan and Wojan, 2007). The point that these researchers make is that the sheer diversity of artists and innovators grouped around specific geographical locations enhances the creative potential of the entire region as members of this creative class (Florida, 2002) feed off each other's energy (Karenjit, 2012). Previous papers have also emphasized that locality can be conceived as a valuable source of innovation in terms of it offering visual raw materials and stimuli and a brand based on reputation and tradition (Drake, 2003). These trends of locally embedded economic relations appear not be threatened by the new advances in ITC; on the contrary, industries seem to be more inclined towards clustering than ever before (Karenjit, 2012).

In terms of policy, the main concern is to understand the nature of the creative sector (definition, boundaries, categories etc.), then to gauge the dynamics of growth of the creative industries, the links between the level of innovation in the creative industries and the traditional industries and to find ways to grow the creative industries as they seem to be important contributors to a nation's economic growth (Muller, Rammer and Thruby, 2008). As Cunningham (2011) says, creative industries represent a part of the service sector with a "crucial input into manufacturing on the supply side and a central role in shaping consumption trends and choices, [that] remains on the margin of innovation policy, planning and research" (p. 241).

## **2. Research Methodology**

This article presents the findings of an exploratory research based on an in-depth case study of a single Romanian SME active in the event management industry. We take a close look at the way in which innovation is enacted as a process which combines people, products, places and public policies. By people we understand the business owner, the employees and also the customers. Regarding the business owner our research questions were modeled based on the framework provided by Sarasvathy (2001): (a) who she is – her qualities, her passions, her dreams; (b) what she knows – her formal and non-formal education; and (c) who she knows – friends, family, customers, other business owners, etc. In terms of the employees, collaborators and clients, our research questions sought to find out the stages during which they become prominent actors and to map their inputs into the innovation process as well as the business risks involved in the implementation of new ideas for which they are responsible.

Places are important from several angles: first of all, innovation is place-contingent (i.e. we call innovation something that is new to a certain place); second of all, in this particular service sector, places serve as major sources of inspiration, but also as major hindrances for the implementation of new ideas.

Products are the results of the creative process, but they are also sources of inspiration, e.g. adapting natural or man-made objects from other domains to the event design. Here we also discuss the influence of technology on the available means to realize a certain vision: creative approaches in conceiving, developing, producing, using and recycling materials are important sources of innovation (EC, 2012), as well as new plant design and new techniques for maintain the freshness of the flowers and enhancing their features. Finally, policies provide support for innovative endeavors, while also providing guidance and hinting at what the future trends will be.

The aim of the article is two-fold: (a) understanding how entrepreneurs from the creative service sector view innovation and (b) how this translates into business processes. We collected information through in-depth interviews and also diary entries, as one of the authors is also the business owner.

## **3. Enrose - Company History**

The company under study is called S.C. Enrose Design S.R.L. (hereafter Enrose) and it was registered at the Bucharest Register of Trade in January 2012 as a new legal entity, although it had begun its activity in 2006 under another legal name. Enrose is run as a limited liability company whose sole proprietor is a young entrepreneur with a consistent background in Business Administration developed during a master program in Business Administration at the Bucharest University of

Economic Studies, a master in Entrepreneurship in collaboration with Anglia Ruskin University of Cambridge and, currently enhanced with a PhD research regarding women entrepreneurship in innovative services.

Enrose started as a workshop which offered high-quality dried flower arrangements in innovative shapes and containers as gifts or as decorations for different events. After a couple of years, spotting the opportunity on the market, the company expanded its portfolio to fresh-cut flower arrangements. Over the years, the entrepreneur noticed a distinct lack of good flower shops in Bucharest. After working in the floral domain and feeling that the demand was not satisfied, she saw the opportunity of opening a company with a new concept. This job offers her the possibility to earn a high-salary and also pursue her life-time passion for design and beauty, which suggests that this venture is a mosaic of life-style, salary-substitute and genuine entrepreneurship.

The expansion from flower arrangements to whole-event design came about naturally at the request of the clients because, as she argues, people usually prefer to buy everything from a single source and not waste time with multiple meetings and negotiations with different suppliers. The entrepreneur decided that the company had the necessary capabilities to pursue this market opportunity, especially due to their history and her recent organizing skills acquired after a one year course in Project Management. At the moment, they offer consultancy services for a large pallet of events like: themed parties, anniversaries, weddings, baptism parties, Christmas parties, corporate parties, concerts, product launching events (marketing events), trainings, conferences, fairs, trips, etc. from creating the concept until its implementation.

As regards their clients' profile, Enrose works with individuals to provide floral arrangements for holidays, birthdays, special events like weddings and graduations, etc. In addition, they look for long-term contracts with business buildings, hotels, restaurants and other businesses that need flowers delivered or arranged on a regular basis and which organize corporate events. These clients provide a more stable and consistent income flow and they also present an easy way to highlight the company's designs to other prospective flower-buyers.

#### **4. The Entrepreneur as an Innovator**

First of all, the entrepreneur sees herself as an avid networker, taking pride in her acquired interpersonal skills and abilities to form relationships and to facilitate the transfer of knowledge to improve coordination and control (in relationship with employees, suppliers, customers, potential customers). As in most creative businesses, a healthy network is deemed vital for the entrepreneurial success which is mostly built on valuable relationships and visibility. Another important skill that is useful when dealing with people is the ability to accept and embrace uncertainty and to take actions based on insufficient, unreliable or conflicting information. The entrepreneur also envisions herself as a flexible person who quickly adapts to changes and prefers to mold on the circumstances rather than try to control the unpredictable environment. These two characteristics, coupled with others such as self-confidence, responsibility, determination, integrity, curiosity, intuition, patience, and a sense of humor bring added value to her work and differentiate her from her peers in the industry, while also becoming imprinted on the company's organizational culture.

Besides these psychological characteristics, the entrepreneur is also involved in multiple activities for self-development such as teaching an “Entrepreneurial Culture” seminar for the freshmen students at The Bucharest University of Economic Studies, Faculty of Business Administration, which facilitates a constant exchange of ideas with young students. She is also a member of the Women Business Club which organizes monthly meetings and also publishes a magazine for business women and she is also asked to join conferences and talk in her quality of a young female entrepreneur to students and other entrepreneurs.

With a work ethic that would politely be described as “tireless”, she works endless hours to make sure every event is perfect in order to meet her client’s expectations and hers as well - she is often the hardest to please. One might think that after so many events, she is not so enthusiastic about the next one, but when you meet her, you immediately understand it is much more than a job for her. With a denomination like “Enthusiast entrepreneur, floral design lover, making events happen” one can see that there is a true passion underneath it all that keeps her restless until she sees the big event come to life. And passion always does the work. When she walks into a room, she does not see only the flower arrangements; she sees the layout, the flow, the linens, the signage, and all the other details that go into each and every flawless event. With an eye for detail, a commitment to her craft and a passion for bringing unique ideas to life, her mission at the end of the day is to orchestrate an unforgettable event that her clients will happily remember.

Besides this, an entire team of professionals is needed to work out each event. Designers and handymen work tirelessly, at all hours, to make sure everything fits into place. There are many hard workers on the team, many of whom the clients will likely never meet, that are 100% essential to the success.

## **5. Enrose’s Definition of Innovation**

Innovation has always been related to the introduction of something new to a certain field, and the underlying newness has to be established in comparison with a certain referential system. For example, artistic innovation is defined in comparison to a referent which can be either: (a) all the other organizations in the field on a global span, (b) all the other local organizations, or (c) the history of the organization under study (Castañer and Campos, 2002). The choice of referential system should be coordinated with the purpose of the innovation study. If the global innovativeness of an organization is under scrutiny, then the cosmopolitan referent is the most useful, but if we want to assess the growing level of innovative change in an organization, it might be more useful to compare the level of newness of today with the historical past of the same organization.

In this article we are concerned with innovativeness as it is defined by managers of event design businesses and the results of the case study indicate that the most useful referential system is the one in which the two axes measure the newness of the design for the company and for the client. Paraphrasing Csikszentmihalyi (1990) we could say that “[innovation] is not an attribute of individuals but of social systems making judgments about these individuals” (p. 198) and, in this particular industry, the most important social system is the client base. Consequently, borrowing the terminology from the creative industries literature, we can state that most of the innovations described by the manager of Enrose have a hidden nature due to the fact that they represent tacit agreements between the manager and the clients based on a thorough knowledge of people’s tastes and current fashion trends, they involve

the users' preferences in the design process and some of the production solutions are one-time innovations that might not necessarily be picked up by the company or are non-transferable to other situations (Miles and Green, 2008).

The fact that the main referential system is based on the dyad company-client is reinforced by the fact that the entrepreneur sees innovation as "a new method of doing things that has a positive impact on the quality of the client's life. The purpose of innovation in event organizing is to transform moments from the lives of normal people in larger than life experiences... To be innovative is to engage in continuous improvement of your client's lives." This interview extract gives innovation a very humane orientation, a trend which is also encountered in other industries where design is said to be dictated by users' needs and preferences (Giacomin, 2012).

In terms of comparisons of innovativeness among companies from the same industry, the main factor of concern appears to be the level of investments in logistics or event-production facilities such as high-end and fashionable furniture and fittings, table clothes and tableware etc. which are seen as indicators of the degree of coordination with leading global trends, thus innovativeness. This type of innovation is clearly expressed in the company's financial documents and it is easily observable by external parties. Therefore, we can talk of the double-sided innovation that is based, on the one hand, on large financial endowments for a trendy inventory and, on the other hand, on the creativity enacted in the process of satisfying each client's requests.

## **6. The Creative Innovation Process**

### **6.1. The generation of an idea**

'Event design' is not a pretentious phrase; it stands for the harmonious result of the meticulous thinking of the designer who sought to incorporate the client's needs into a unitary vision. The world of floral design offers stunning scenery and countless rich sources of inspiration. All successful entrepreneurs in this field share a passion for flowers and a free creative spirit, but these are often not enough. Best floral designers also have a sound knowledge base, and a desire for training and continuing professional development, which sets them apart from amateurs and beginners. The end result is to promote knowledge that will lead to the creation of floral designs and to the preparation of a floral and event design business characterized by ethics, professionalism and total commitment to the clients' dreams.

The process of idea generation is based on a mixture of different sources of innovation. First, there is the person of the entrepreneur who continuously seeks knowledge. Reading books, taking leadership, negotiation techniques and public speaking trainings and participating at business conferences and artistic events are just some of the means through which she enhances her creativity. Secondly, the entrepreneur invests most of the company's profits in acquisitions of up-to-date equipment and technologies which are in accordance with recent trends in decorations. Thirdly, in order to become a pioneer in the event design, she collaborates with experts in the field and in connected fields (architecture, construction, arts and music, marketing agencies). Participation at conferences and workshops held by experts in event management enhances the entrepreneur's capacity for innovation, and these events constitute an important networking opportunity.

Working closely with the clients is one of the major sources of inspiration for new ideas, but this involves also certain kinds of risks. Although clients that are highly motivated but with a limited knowledge of technological possibilities are more prone to introducing radical ideas than the company's designer (Kristensson and Magnusson, 2005), that same lack of knowledge might induce a stretch beyond the company's production capabilities and the manager then runs the risk of either disappointing the client during the negotiation stage or after the implementation stage. Face-to-face communication may be particularly important for the transfer of knowledge; everything is best explained and demonstrated in person. Finding ways to meet customer desires in an attractive manner and taking care of the budget in a timely manner is always a challenge for the event manager.

Another constraint that leads to innovation is the nature and space and this is because an event has to be perfectly fitted in the scenery or a specific event hall. Most of the times, the event design needs to be adapted to fit these natural or man-made shapes in order to be appealing to the beneficiary.

## **6.2. Negotiation of the idea**

In selling ideas and concepts to her customers she makes use of the following techniques: presenting the features with an emphasize on the benefits, showing flexibility to the budget they want to invest in their event, making visual boards and sketches or even live demos for a better understanding of the final outcome. For example, if she wants to recommend a live band for an event, then she could invite the client to one of the band's performances in a different venue to really feel the atmosphere. Or she might do a demonstration for the wedding bouquet or for the table center piece to have a clear representation of the color scheme, textures and materials to be used. These methods also diminish the resistance to the initial proposals. The entrepreneur is often met with resistance to new trends, techniques and technologies coming from customers and until they adopt the new ideas it takes time and patience.

Another important aspect is the negation that leads to a final agreement and the signing of a contract. In this particular phase, there is a risk that other decision makers appear and impact the progression of the project and this is where she makes use of her adaptability skills. For example, she might discuss with the bride all these aspects, but the decision power might be held by the groom. Or perhaps the godparents have a decisive say in the end, and she needs to detect these threat early on and concentrate on convincing the person that will have the final say.

## **6.3. Preparations for implementation**

This and the last stage are the periods during which multiple on-the-spot solutions are given to "everyday problems" which shows that innovation has a planned dimension and a spontaneous one. The spontaneity of the innovation is visible only from the position of a practitioner: in this case, the workers and the managers. During this stage the network of professional gets activated and every task is allocated to an individual or a company, while the manager acts as the conductor of the orchestra. Most problems arise from lack of coordination between parties or misunderstandings in knowledge transfer. This stage can be very long and it represents the time when the entrepreneur sets things in motion and starts investing time and money into the actual event plan. As most of the guidelines for the event have been set during the previous stages, now innovation can arise as a solution to

mundane or unforeseen problems, thus being required by the circumstances and by the desire to accomplish the set goals. This is the stage during which unforeseen events can ruin the whole process of careful planning, such as a relative interfering and offering another venue and a different event planner, a marriage proposal being canceled etc.

#### **6.4. Implementation of the idea**

This stage usually takes a couple of days, and it represents the most difficult task and the most challenging part of a project. It requires flexibility, coordination, team work, time management, and physical endurance. For the entrepreneur it is of outmost importance to register the clients' feedback and she makes use of post-event phone calls or other means of contacting the clients to get their input. For the learning stage in the innovation process, implementation is highly important because it provides customer validation for certain initiatives and the feedback necessary for the entrepreneur to know which aspect should become company policies and which should be dropped.

#### **7. Conclusions and Future Research**

One of the main findings is related to the referential system that is in use in the event industries which is based on the dyad client-company. This is something unusual because most of the literature on business innovation compares the companies from the same industry and does not take such a relational approach. The innovation paradigm that we propose puts emphasis on a number of research questions: Is innovation threatened by copying or is it protected by its hidden nature?; b) Is this sector of the economy innovating at a different pace than the manufacturing sector?; and c) Is there a need to uncover the innovation process in this sector so as to provide insights for manufacturers looking to achieve artistry in mass customization?.

Next, we uncovered the fact that innovation is a process that is concomitant with risk assessment and risk mitigation and that a greater understanding of the innovation process has to start from a thorough research on the perceived business risks and the ways in which the introduction of something new modifies the risk-portrait of the company. Most important are the risks associated with the fact that most creative companies provide 'experience goods' which the client can't try before acquisition and whom bring clients a degree of satisfaction that is utterly subjective and intangible. Therefore, the study of the risks involved in innovation may turn out to be the perfect recipe for unraveling the nature of the innovation process which is not as linear as it appears in retrospect (Green, 2008), but rather sinuous and continuously changed by internal and external factors which for the company can be regarded as risks.

In terms of policies, there is a clear lack of government support for innovation in this particular field of the creative industries and we propose two methods through which the system of R&D could help develop the quality of events in Romania: a) universities should be supported by national funding to create research centers in partnerships with event planning companies and b) introduce in their curricula aspects pertaining to innovation in the creative industries, especially in the case of business schools and liberal arts universities, but also technical universities.

Because it was a single case study analysis, the conclusion drawn in this study could be further enhanced by a more thorough research which would seek to discover if

the same definition of innovation applies to all the companies in the industry or there are multiple ways of seeing and enacting innovation inside the same industry. Also, there is a stringent need to research the role of female entrepreneurs in innovative domains, and this is going to be covered by one of the authors' PhD research thesis.

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# DOES CIVIL SOCIETY CREATE SOCIAL ENTREPRENEURS?

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**Abstract:** *The purpose of this paper is to analyze whether civil society can enhance or stimulate on its own the creation of social entrepreneurs, by studying its traits and the various definitions attributed to it. The main question that the paper wants to answer to is <Does civil society create social entrepreneurs?> and the main approach used in this research paper is the theoretical one. By studying existing articles, research studies and books on the topic, the paper tries to emphasize the various dimensions that civil society can embrace, as pictured by various authors, as well as how these dimensions can relate to social entrepreneurs and the emergence of social businesses. The paper is not meant to be a breakthrough in the field, but rather to launch a question that is related to very important topics these days, social entrepreneurship, social innovation, social businesses and their connection to a very much debated topic-civil society. The paper is a work-in progress and wants to stimulate the research regarding the search of the sources of social entrepreneurship, in order to analyze them and better establish them as incubators for the future studies. It wants to be of use to whoever is researching the concepts illustrated above, as well as for people who want to get in touch with the new buzz words of the academic and entrepreneurial fields. The hereby paper stands, as previously stated, in a theoretical framework and the findings represent a mere analysis of the cause-effect relationship between the characteristics of the civil society and those of social entrepreneurs. However, we are of the opinion that it can be a very good starting point for the ones interested in the domain, to analyze more sources of social entrepreneurship or further refine the answer to the question addressed in this article.*

**Keywords:** *civil society, social entrepreneur, social change*

**JEL classification:** *L26*

## **1. The Relation Between Civil Society and Social Entrepreneurs**

When talking about the traits of the social entrepreneurs, we cannot stop on wondering what environments are best suitable for fostering these traits, for encouraging the real life person to act as an agent of change, to assume chances and focus his/her attention on the factors that cause a certain social problem and the way in which they can be hindered.

Although these environments can be various, we decided to focus on one specific concept, which has become of utmost importance within the last few years, namely Civil Society. We cannot help on asking if Civil Society, such an omnipresent and under constant development organism, which deals with the needs of the society, fosters or does not foster social entrepreneurs.

However, in order to thoroughly analyse whether Civil Society is an incubator for

social entrepreneurs and social change or whether it raises barriers against it, one must first understand what civil society is and how it acts.

We are not trying to make a case regarding civil society nor do we try to define it, as there are entire articles and research theses that do that. Our intent is to clarify the concept based on specialised literature and different points of view.

Petrova in her quest about the civil society in post-communist countries, makes a very good point regarding the status of the concept in the literature:

" *There is no consensus on what civil society is or what constitutes it (e.g., Hyden, Court and Mease, 2004). Scholarship drawing on various disciplines—political science, sociology, area studies, political philosophy—abounds with definitions and conceptualizations of civil society. They range from the "ether" of participatory citizenship intuitively associated with democracy, to general ideas of "democracy from below," to the "broad base of active citizens able to influence decisions that affect their lives" described by USAID writers, to the space or middle-level organization between the family and the state, independent of the state (e.g., Varshney, 2001; for a review of definitions)*" (Petrova, 2007: 1278)

No matter the disagreement, the concept of civil society has gained a lot of recognition during the last years and is allegedly one of the solutions to balance political governance.

The roots of civil society go as far back as the 18<sup>th</sup> century, when people tried to redefine their statute in the society and when social order was undergoing a visible decline.

During the following years and centuries, the concept was further refined and enriched, as Anheier (2004) emphasizes, with notions of *civility* (Elias, 1994), *popular participation and civic mindedness* (Verba et al., 1995), *the public sphere* (Habermas, 1992), *social capital* (Putnam, 2000; Coleman 1990) *culture* (Gramsci, 1971) and *community* (Etzioni, 1971).

This concept is a very powerful one in the USA, whereas it has started more recently to gain acknowledgement in Europe. One of the arguments that stands for its increasing power is the recent desire of the EU to include the civil society in the decision making process, regarding it as a powerful source to connect to the citizens of the European Union and of Europe as a whole.

CINEFOGO (Civil Society and New Forms of Governance in Europe) Network of Excellence, which was funded by the EU within the 6th Framework Programs focuses on the importance of improving citizens' participation in governance. This requires new knowledge on the importance of social and cultural diversity, active citizenship, civic participation and organized civil society, all issues that have become more pressing with the on-going enlargement of Europe—a Europe characterized by growing inequality in economic and social conditions of the citizens, including education, but also increased diversity in the perception of how to proceed in the process of economic, social and political integration of the European nation-states (CINEFOGO, 2012).

But we shall leave that aside, for the moment, as it is necessary to understand more of the concept. Helmut Anheier, in his book *Civil society: Measurement, Evaluation, Policy*, regards *civil society as the sphere of institutions, organizations and individuals located between family, the state and the market in which people associate voluntarily to advance common interests* (Anheier, 2004: 46 ). Though he does not pretend it to be a complete definition and he underlines the fact that it does not encompass all of its aspects, we consider it to be a very simple and clear one.

As such, we can underpin the three main characteristics of this organism, which shall or must be encompassed in any given definition:

- Structure: organizations, individuals and institutions;
- Process: voluntarily association/ networking;
- Objective: advocate common interests of the society.

The Civil Society is thus represented by all non-governmental institutions or networks that are a separate entity from the government and they act with the purpose of social wellbeing. It can be comprised of people, NGOs or even the business world.

When talking about so many units, each with its own dimension and specific characteristics, with a set of values and individual activities, it is obvious that the interaction among them and the activity of civil society affects these sets of values. Just like Tonkiss, Passey, Hems and Fenton observed in *Trust and Civil Society*, the latter may have a strong impact upon culture, religion, behaviour of individuals, the economy or the government.

This is an extremely important aspect which is at the grounds of our quest about civil society being an environment of development for the people it works with.

Michael Edwards (2009) as cited by Vaduva (2012) states in his 2009 book, *The Civil Society*, that “the civil society is much talked about but rarely understood(...) It is impossible to have a conversation about politics or public policy these days without mentioning the magic words *civil society*” (Vaduva, 2012:222). Is this true? Is civil society only a buzz word or is it “our last best hope?”(Rifkin, 1995: 106), as Rifkin says?

Some argue that while government institutions are poorly organized to tackle with complex problems, it is in the responsibility and in the power of the civil society to take the ideas to another scale (Murray, Caulier-Grice and Mulgan, 2010). The problem is whether the civil society has the resources, the capital and knowledge to do so. Is it powerful enough to handle these complex problems? More importantly, is it capable enough to gather the people necessary to do so or educate them, empower them to do so? We posit that even though quantitative measurements are not yet demonstrating this, there is evidence throughout the world that the answer to these questions is at least partially, yes.

In fact, civil society acts like a link between all the characteristics previously mentioned and has a very important role due to the fact that it builds a sense of community and is able to share resources and connect networks in order to achieve certain goals. A very nice phrase of Alexis de Tocqueville used in his book *Democracy in America*, when he referred to the ability of a nation to voluntarily solve their common social problems was “the art of association”. This completely underlines the key feature of the Civil Society, which is association in order to create value for a common purpose.

This brings us closer to how the civil society creates value. Though a difficult and very important aspect, we shall but merely analyse it, as it directs us to the answer of our question. Does civil society create social entrepreneurs?

One of the answers could be that civil society creates civic entrepreneurs. Well, this is rather wrong from one strong point of view, namely the fact that civic entrepreneurs are economic entrepreneurs, who deal with economic assets for economic purposes, with the distinction that they believe success can be achieved only through collaboration - they know how to work with people.

As Henton, Melville and Walesh (1997) see it, they are involved in their community

out of enlightened, long-term self-interest. They believe that their personal long-term interests and those of their organization are to some extent tied to the health of the local economy and community. They view it as being in their best interest to work towards a long-term positive interconnectedness between business vitality, schools and universities, physical infrastructure, natural environment, and tax base. (Henton, Melville and Walesh, 1997: 4)

On the other hand, social entrepreneurs act with a social purpose, with and for the interest of the community and of the social wellbeing, leaving aside economic benefits for self-interest.

In order to see if social entrepreneurs can be born from the environment that civil society creates, we have to start from the dimensions of the civil society concept. According to Anheier (2004), the dimensions to be measurable and assessed, in order to conclude what value can be created, are:

- Structural dimension: composition and sources of support of the civil society;
- Legal dimension: the regulatory environment in which it operates;
- Impact dimension: contributions of the civil society;
- Value dimension: norms and cultural elements.

The last two are the dimensions that are of an utmost importance in our analysis, as they emphasize the contribution that civil society has with his actions, the purpose of its actions and the added value it wants to bring.

We believe that by understanding this, we come to the functions of the civil society, which may be divided as follows:

- To create social capital;
- To find solutions to social problems through collaboration between various entities but by preserving a high degree of independence to the state;
- To engage motivated people voluntarily to act on common purpose;
- To raise capital from various sources in order to sustain itself.

By watching all these functions, it comes naturally to find the link between each and everyone one of them with the traits of the civil entrepreneur and of his/her actions. Let us start with the creation of social capital, another ambiguous term.

For the sake of simplicity, we shall consider that social capital is about the value of social networks, bonding similar people and bridging between diverse people, with norms of reciprocity (Dekker and Uslaner, 2001). Therefore, social capital is the power of networks, of people working together and sharing information.

The fact that civil society creates networks through collaboration of various units is easily understood. Which is almost as simple to depict is the fact that social entrepreneurs use networks in social ventures, in order to add more value to the sustainability of the innovative solution. A very good example is Grameen-Danone venture, started by Muhamad Yunus together with Danone, in order to offer enriched yogurt with 30% of the necessary vitamins to people in Bangladesh.

This venture was built on an existing infrastructure of social network, upon collaboration and information sharing.

Therefore, we want to underline the fact that the creation of network, lessens the activity or the possible future activity of a social entrepreneur, by offering a vast infrastructure of connections that a future social entrepreneur can and will use in his activity. Moreover, the future social entrepreneur will enrich the existing network by supplementing with other sources and creating thus, more social capital.

Further, the second characteristic is finding solutions to social problems which is

also nascent to social entrepreneurial activity. Why?

We posit that, by offering the process of defining and understanding a problem, analyzing the main possibilities in which it can be solved and finding the way of implementation empowers all the units involved in the process (including the possible future entrepreneurs) with the knowledge of problem identification and finding the solution.

Moreover, it empowers them with the confidence that if they see a problem and put an effort into finding a solution, the problem will be solved in the end. Thus, a powerful motivation is triggered, motivation that is the most important pillar of the entrepreneurial activity.

Furthermore, this process is an important one in the entire entrepreneurial activity and may constitute the difference between success and failure.

Thirdly, we come to the voluntarily engaging people to do something for the purpose of the social wellbeing, with a strong sense of community and with desire to perceive this as a common goal.

Willingness and motivation are strong characteristics of any kind of entrepreneurs, whether they are social, business or other types. Determination to involve yourself in a problem, to fight for it and to continue no matter the impediments and the problems you might face, these are the characteristics we want an environment to foster.

Humans usually need reasons, whether sentimental or ration, to selflessly engage in an initiative of civic nature.

Civil society does that, as it encourages people to take a stand for what they believe in, to roll up their sleeves and fight for it, to overcome the barriers of the government, of the gravity of the problems and of the lack of interest of others.

Therefore, in this regard, civil society is for sure, not only an environment that fosters social entrepreneurship, but it also gathers together people that have the opportunity to transform themselves in social entrepreneurs, encourages them to become agents of change.

Civil society seems to create a *Do It Yourself* rule...if you see a gap (a problem), fill it in. Find that one service/solution that offers the necessary items for the problem to be solved. Be yourself the one to act for a purpose you believe in!

It is important to take a note that this characteristic is rather unique from all other environments. On the issue of "participation" non-profits have a voluntary system whereas government has an automatic/coercive one and business a quasi-voluntary, based on economic needs.(Gidron, 2010: 405)

On the issue of "motivation" Anheier characterized business organizations as having material motivation, government as purposive and non-profits as solidary. (Gidron, 2010: 405)

Last but not least, we reach the final characteristic, that of raising capital for the sustainability of its actions. We perceive this to be, in an equal manner, a source for social entrepreneurship, as well as a barrier to it.

Sustainability of a social venture is one of the most important aspects, one deeply explained and emphasized by Muhamad Yunus in his book, *Social Business*. Without the aspect of economic sustainability, a social venture would become a charity.

Therefore, the source for fostering social entrepreneurship comes from providing its users with the infrastructure needed for finding the suitable funds of capital, the right philanthropists or government funding.

However, it also sustains a barrier - that of raising capital from other independent units-, which might hurt the independence of the social venture and is not for sure desirable.

More often we relate the growth of social entrepreneurship with existing trends in the market such as the growth of consumer awareness, sustainable business practices, the ridiculous economic gap between business leaders and the rest of humanity. Furthermore, democracy tends to be the most proper environment to foster social entrepreneurship; this means that even the political regime can be a barrier to this kinds of endeavours. So there are better chances of success if we are on the same barricade with the system, and not against it.

The limitation of the civil society concept as an aggregation of institutions, organizations and individuals specifically, is the lack of recognition *that the organizational reality of civil society requires more than individual trust and willingness to participate in various forms of action. Factors like funding, managerial experience, media coverage, and the like—or in general resources—do not figure in individual level accounts of civil society* (Petrova, 2007: 1282)

Therefore, this seems to be vicious circle, as Civil Society needs people with certain knowledge but also empowers them with multiple knowledge and know-how, in order to become, on their turn, agents for the society, entrepreneurs with the same common purpose, social wellbeing.

## **2. Conclusion**

We posit that, the analysis of the concept as well as of the objective of the civil society leads us to a favourable answer regarding the question addressed in the beginning of the paper.

The environment of the civil society is for sure an incubator for social entrepreneurs and social ventures. It offers infrastructure for social capital, teaches self-reliance and efficiency, advocates for sustainability and more importantly, militates for social wellbeing and self-implication in obtaining it.

We share the point of view of some scientists who are of the opinion that of crucial importance is the fact that universities have the moral obligation to produce not only innovative and entrepreneurial graduates (Kwong, Brooksbank, and Jones-Evans, 2006; Thompson, Kwong, and Jones-Evans, 2012), but also civically aware and socially responsible citizens (Steiner and Watson, 2006). The society in which we are living experiences a kaleidoscope of persistent problems which now are actually on the rise more than ever, and the ones who can alleviate them are the social entrepreneurs. Therefore, by means of this article we try to suggest the premises of our next article "Universities have the moral obligation to foster, enable and create social entrepreneurs" in which we argue for the duty of universities and society as a whole to support and promote social entrepreneurs, Besides, we argue in favour of the shift from the traditional businesses towards the social businesses which are more than an adequate solution for the current economic, political and social situation the world is facing. As a concluding remark, we adhere to the opinion of Alex Nicholls (2011) that social entrepreneurs represent a new generation of civil society actors who are driven to address the systemic problems facing the world today.

We look forward to reading other papers that would address this question as well as emphasize other sources for the creation of social entrepreneurs.

### 3. Acknowledgements

We wish to thank our coordinating teacher, PhD. Prof. Carmen Paunescu, for encouraging us to study this field, and also PhD. Prof. Sebastian Vaduva for sharing with us his personal insights related to the study of the civil society concept. We found both their guidance very valuable. Last, but not least, we would like to mention that this article harnesses partial results of our doctoral theses on Social innovation in higher education (Oana Găuca) and Corporate Social Entrepreneurship - The role of individual and organization characteristics in building Corporate Social Entrepreneurship (CSE). The case of multinationals (Shahrazad Hadad), Business Administration Doctoral School, Bucharest University of Economic Studies.

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# THE AUTHENTICITY AND TRACEABILITY OF FOOD – CONSUMERS PROTECTION FORM

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**Abstract:** *The quality of food is closely related with food safety, highlighted by their authenticity and traceability. Essentially the food it is a carrier of information, his quality reflecting off the capability of the body to decode them and so to provide a healthy lifestyle. Each individual, as well as the community, is preoccupied by the great problems of food, eating and the food behaviour, seeking the right solutions to the questions: what, how, when, and where do we eat to satisfy our physiological necessities. Food and food behaviour are essential determinants of our numerous pathologies, appreciating that many of the severe diseases may be prevented by lifestyle changes where the food is playing a key role. For authentic products, in this article there are presented information regarding benefits of traceability of products. The traceability of food products can be obtained by registering the ups and downs of the physical flux obtained during the production process. The objective of traceability is to obtain total control on products by individual and group identification to intervene in case of post-processing defects or any inconvenience. In traceability the "one step back, one step ahead" principle is applied. This means that any company has the obligation to have all the necessary information regarding the product, including the nature of raw and auxiliary materials and to possess information regarding the date and delivery destination. For the accomplishment of this wish, the individual identification of the goods, products, locations and place is indispensable. The traceability of the product is based on the identification code. It is monitored the changes that have occurred during the production processes, transport, storage and distribution flux.*

**Keywords:** *Foods, consumer, safety, health, sustainable development*

**JEL classification:** *M10, Q01*

## **Food authenticity**

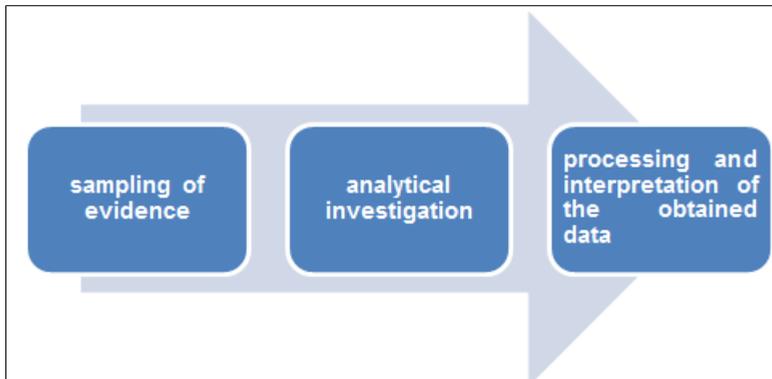
The authenticity is a component of food and can be defined by the compliance of food to the referential genuine. The concept of authentic, defined by something original, true, undoubtedly etc. applied to food, certifies that these products are from a certain origin in concordance with standards and force rules and with the inscriptions of the presentation label.

The authenticity, as a part of quality components, must be certain and certified and every product must have a name accompanied by a set of legal features to avoid every type of confusions on the market.

Due the diversity of authentication criteria and the high number of products, the methodology of deceleration of authenticity and estimation of the amplitude of fraudulent products includes a series of methods and techniques of general/specific

investigation: chromatographic methods, spectroscopic methods, biochemical methods, immunological methods, AND analysis, electrophoretic methods, radiological methods, microscopical methods.

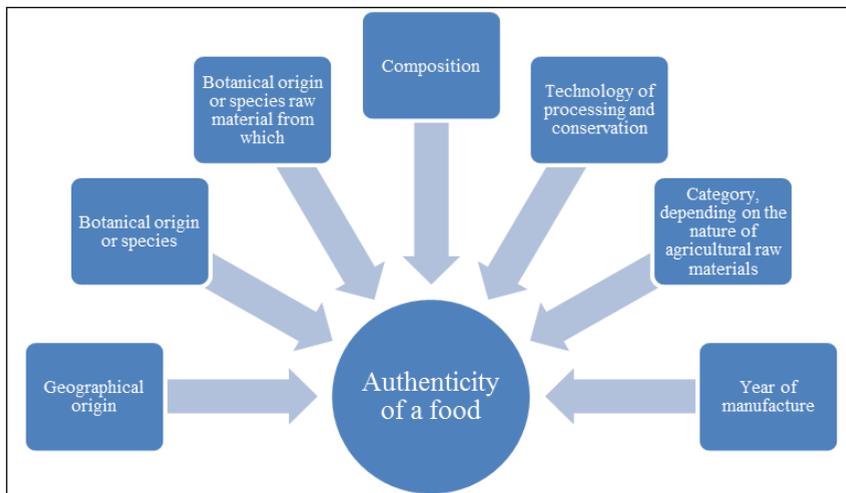
The criteria which define authenticity of food are numerous and variable from product to product (see fig.2) and the authentication and/or detection of possible frauds requires 3 steps:



**Figure.1:** The stages of detection possible fraud

Source: Bulancea, M. and Rupeanu, G., 2009

The processing of food data even from raw materials represents a basic link for ensuring the accuracy of the results. For this purpose, is required to make a sampling plan which details the way of sampling the data, for these samples to sufficiently representative for the product which is under investigation.



**Figure.2:** Defining elements for authenticity of food

Source: Mencinicopschi, G. and Raba, D., 2005

## **The traceability of food**

Food safety represents compliance of hygienic-sanitary in the process of production-distribution, for guaranteeing the health of population by consuming safe food in terms of sanitation, nutritional values and respecting the environment (Mencinicopschi G and Raba D., 2005).

Food safety can only be reached by the growth of quality and food services monitored through the whole food chain, an indispensable instrument being the achievement of realizing the traceability.

The management system of food safety it's found in ISO standards 22000 which specifies the requirements of the system in a food chain.

The transposition of this standard in Romania by the Law 150/2004 regarding food safety, represents the legal and juridical base for assuring a high level of consumer health protection and the interests of those towards food, considering the offer diversity, traditional products, correlated with the efficient operation of internal market.

The mentioned law defines traceability as being the identification possibility and following during all stages of production, processing, distribution, of food, animal food, of an animal dedicated to food production or a substance which follows or might be incorporated in food or animal food.

For commercial and food safety the monitoring of food is required from the producer to final consumer, this implying a series of complex solution and implicitly, and traceability assurance of the product according to the concept "from farm to table".

By the standard ISO 9000/2000 is defined that traceability is the ability to manage the history of a product, application or localization of an entity by recordings.

The traceability offers the possibility to reconstitute/follow the route course of a product from the beginning of his manufacturing until the consumer, through all phases of production, packing, conservation, transport, manipulation, depositing, and commercialization.

In the sphere of food, traceability makes bonds between raw materials, their origin, processing, distribution and their location after marketing.

The Codex Alimentarius commission by traceability emphasizes the capacity of following the course of food in different specific phases of production, processing and distribution.

The main elements which affect in certain mode the politics of an organisation regarding traceability are:

- ✓ monitoring the entire supply chain;
- ✓ objectives set by the organization to ensure food safety.

Traceability benefits resulting from:

- ✓ identifying sources of contamination;
- ✓ managing crisis situations;
- ✓ withdrawal from the market of products that may endanger the health or life of the consumer.

For a food production unit, traceability can be translated as "logistics management" and in this case there will be highlighted two key concepts: the traceability and the system of traceability as much (Pascu E., 2010):

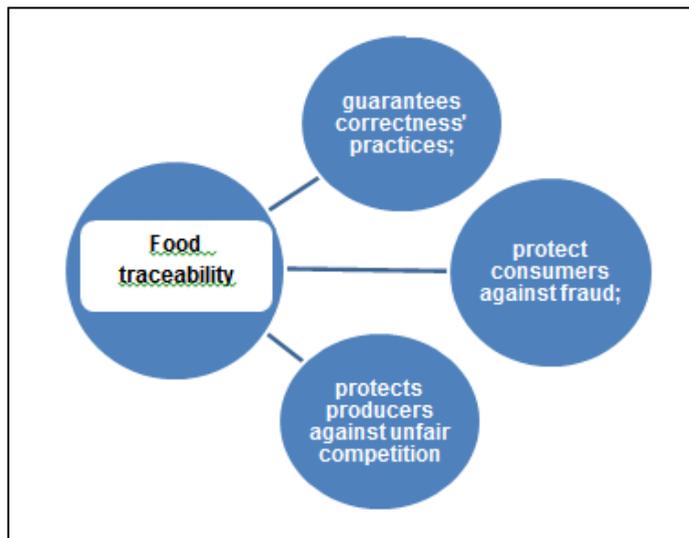
- ✓ traceability - the possibility to identify and follow by the entire course of all stages of production, processing and distribution of food, animal food, of

an animal dedicated to food production or a substance which follows or might be incorporated in food or animal food (according to Law no.150/2004);

- ✓ the traceability system, the total data and operations capable maintaining the informations needed of a product and its components during a part or the entire production and use chain (according S.R EN.ISO 22005).

Food traceability should cover basically two objectives:

- ✓ to provide information to users of the product;
- ✓ to contribute to food security by enabling, where appropriate, product withdrawal and recall nonconforming lots.



**Figure.3:** Benefits of food traceability

**Source:** European Commission, 2007

Traceability requirements in Article 18 of Regulation 178/2002 of the European Parliament are determined as follows (Pascu E., 2011):

- ✓ the traceability of food, pet food manufacturer or any other substance intended or expected to be incorporated in food or any other food products shall be established in all the stages of production and processing;
- ✓ food and feed operators must identify any person from whom did the food supply, feed, food-producing animals and any substance to be incorporated into food and also must have systems/procedures that will allow information to be made available to authorities on request;
- ✓ operators of food and feed business must have systems/procedures to identify other operators who have delivered these products. information will be provided to the competent authorities at their request;

- ✓ foods/feeds that are placed on the market or to be placed on the market within the European Union will be properly labeled / identified to facilitate their traceability.

## **Conclusions**

The customer protection was and continues to be one of the European essential values, fully reflected, over time, into community law.

At the proposal of European Commission is to be achieved by the end of the year 2013, an internal market more integrated and efficient, particularly in the retail sector, commercial agents, technologies and selling methods in retail markets in the EU, based on an equally high level of protection, competitive markets, open, transparent and fair, reliable products and services and not least commercial agents, especially the IMM to be able to sell products in the EU without barriers.

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# THE ANALYSIS OF PERFORMANCES OF THE ENTREPRISE THROUGH INDICATORS OF THE VOLUME OF ACTIVITY

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**Abstract:** *The activity of any economic entity is aimed at providing objects, works and services meant to fulfill certain social needs, as well as at achieving a certain level of profit which would enable the enterprise to maintain and/or develop in business. In order to reach these objectives, the offer of the enterprise should meet the demand of the market within which it activates in terms of: volume (how much it is demanded?), structure (what brands are demanded and what is their share in the total production?), rhythmicity (during what span of time?) and level of quality (does the offer of the entity meet the qualitative level demanded by clients?). The enterprise develops interconditioning relations with its external factors, namely clients, suppliers, the state, employees, shareholders, banks, the government and budgetary institutions; the degree to which their expectations are met reflects the efficiency of the activity undertaken. Among the main indicators of performance, one could cite the turnover and the added value that reflect the economic raise of the entity, conditions its strategic position and defines its place in relation to other competitors, within the branch of activity concerned. A high level of turnover and added value guarantees that the economic entity develops a profitable activity, that it is expanding and developing, a fact with consequences upon the main economic-financial indicators but also upon the efficiency of the activity of the economic entity. The main objectives of the present paper are to point out the dynamics of the indicators of volume of activity, of factors of influence and of their strategies of growth. In addition to that, the study tries to ground and analyse theoretical aspects by providing some practical examples based on real data obtained from an economic entity during the period 2008-2011, but also data published by the INSSE for the same period, in order to observe its evolution in relation to other evolutions from the sector concerned.*

**Keywords:** *turnover; volume indicators; methods of analysis; dynamics structure; strategies of growth; factors of influence.*

**JEL classification:** L25 M11 O12

## **1. The system of value indicators reflecting the volume of the activity of production and marketing**

The activity of production and/or service provision exerts a decisive influence upon all aspects of economic activity – the volume and the schedule (brands) of production determines the specialization of the enterprise, its type of organization, the utilisation of capacities of production, of material and human resources. This segment of

activity also influences the financial results of the economic entity. The entire activity of an economic entity can be assessed through a system of volume indicators. The economic entity develops in a current and repeated manner operations of purchase, production and marketing which give content to its exploiting activity, an activity which, after all, is the basic activity of the economic entity. The efficiency of the exploiting activity and of the economic-financial performances that define the activity of the enterprise can be assessed mainly by indicators, both of volume, or physical, and of value. (Mironiuc, M., 2006). Physical indicators reflect in a real way the own effort of the enterprise in what regards the volume of its activity and they are not affected by price inflation. However, they can only be applied to entities with homogenous production and don't allow other activities to be included in the physical production (the production in course, semifinished products, industrial works) (Păvăloaia, W., 2002).

These shortcomings are surpassed through value units (costs, current and/or comparable prices), which also offer the possibility to obtain indicators aggregated through successive additions, regardless of the nature of production. The economic theory and practice offers a system of value indicators in order to assess the results of the activity of production and marketing of an enterprise, as well as the effects of the dimension of economic activity (Vâlceanu, Ghe. et. al., 2004. Some data sources useful to analyze these indicators are: The Profit and Loss Account, the table of intermediary balance accounts and data from the operative records of the enterprise. The table 1 presents the step-by-step formation of intermediary balance accounts, based on real data from the level of an economic entity and their evolution in time during the years 2008-2011.

**Table 1:** The system of volume indicators. Formation and evolution

Indicators	Absolute values (thousands lei)			
	Chain-based indices (%)			
	2008	2009	2010	2011
Sold production ( $Q_v$ )	82831	79075	88323	102116
	-	95,47	111,7	115,6
Income from the sale of goods ( $V_{VM}$ )	7019	7746	10099	12224
	-	110,4	130,4	121
Income from exploitation subventions associated with the net turnover ( $V_S$ )	0	0	0	0
	-	-	-	-
Commercial discounts allotted ( $R_a$ )	0	0	2493	3449
	-	-	0	138,3
Net turnover ( $CAN=QV+V_{VM}+V_S-R_a$ )	89850	86821	95929	110891
	-	96,6	110,5	115,6
Variation of stocked production ( $\Delta Q_s$ ) (Balance account C)	4704	213	1857	737
	-	4,5	871,8	39,7
Production obtained intended for delivery ( $Q_f = Q_v \pm \Delta Q_s$ )	87535	79288	90180	102853
	-	90,6	113,7	114
Immobilized production ( $Q_i$ )	0	0	0	197
	-	-	-	100
Production of exercise ( $Q_{ex}=QV\pm\Delta Q_s+Q_i$ )	87535	79288	90180	103050
	-	90,6	113,7	114,3

Indicators	Absolute values (thousands lei)			
	Chain-based indices (%)			
	2008	2009	2010	2011
Expenses with goods (Ca)	5775	5218	6125	7550
	-	90,3	117,4	123,3
Commercial margin (MC = $V_{VM} - Ca$ )	1244	2528	3974	4674
	-	203,2	157,2	117,6
Total material expenses (CM)	36567	26018	28018	31603
	-	<b>71,2</b>	<b>107,7</b>	<b>112,8</b>
Expenses with external provisions (Lt)	15767	17781	23842	28684
	-	<b>112,8</b>	<b>134</b>	<b>120,3</b>
Intermediary consumption (Ci)	52334	43799	51860	60287
	-	83,7	118,4	116,2
Industrial margin (MI = $Q_{ex} - Ci$ )	35201	35489	38320	42763
	-	100,8	108	111,6
Added value (VA = MC + MI)	36445	38017	42294	47437
	-	104,3	111,3	112,2
Exploitation income (VExpl)	97571	87879	98120	112197
	-	90,1	111,7	114,3
Exploitation expenses (CExpl)	86376	78980	91381	102342
	-	91,4	115,7	112
Exploitation result (REExpl)	11195	8899	6739	9855
	-	79,5	60,2	146,2

Source: Real data at the level of an economic entity from the Account of Profit and Loss

The net turnover (CAN) highlights the dimension of the business log achieved by an economic entity in its relations with other partners. As an indicator of volume of the activity of an enterprise, the net turnover includes „sums obtained from sale of goods and service provision that fall into the category of current activities of the legal entity, after deduction of commercial discounts, of the added value tax, of other rates and taxes associated” (acc. to OMFP 3055/29.10.2009, M Of. al României nr.766/10.11.2009).

At the level of economic entities with an industrial profile, an increased share from the total of the net turnover belongs to the production sold ( $Q_v$ ), whereas a smaller share can be attributed to income obtained from the sale of goods ( $V_{VM}$ ), if the given entities own a chain of stores to market part of their products.. In the case of economic entities that function in the domain of distribution and marketing of goods, the greatest share (100%, if there are no discounts) from the total of the net turnover belongs to the income obtained from the sale of goods. Income from exploitation subventions associated with the net turnover ( $V_s$ ) and commercial discounts allotted (R) generally have insignificant shares and depend upon the capacity of the entity to attract subventions for investments (from the state or from various European institutions), while allotment of commercial discounts depends on the ability of negotiating with clients), but also on concrete conditions of market circumstances (in periods of crisis the purchasing power and the demand fall off, hence these discounts could exert a bigger influence on the turnover).

On analyzing the data from Table 1, we can observe that during the period in view the net turnover records a slow decrease in 2009 as compared to 2008, which is followed by increases in the next two years (respectively by 10,5% in 2010 compared to 2009 and by 15,6% in 2011 compared to 2010). As far as the entire period

analyzed is concerned, we could observe that the share of sold production within the total of turnover is dominant, due to the object of activity of the enterprise, which is the activity of production. So that, on composing elements, the production sold follows approximately the same evolution as the turnover (a fact which is, in fact, normal, because the production sold holds the greatest share within the turnover), while income from the sale of goods through the own chain of stores follows an ascending trend all along the period in view, with significant increases as compared to the preceding period. The economic entity analyzed grants discounts, insignificant in 2010 and 2011, but does not record income from exploitation subventions.

*The production obtained intended for delivery ( $Q_i$ ) or the production of manufactured goods* represents the direct and useful result of the producing industrial activity, expressing the value of products manufactured, of works executed and services provided during a certain period of time and which are to be sold. The production of manufactured goods can be calculated by using information from the accounting inventory. Although not included among indicators from the Account of Profit and Loss, neither among indicators presented in the table of intermediary balance accounts, the production obtained intended for delivery is an indicator useful to estimate the potential result of exploitation (profit or loss), because it offers better correlation with effort indicators in order to calculate the efficiency of the activity of the economic entity". (Vâlceanu, Ghe., et. al., 2004: 46-47). At the level of the entity analyzed, we can observe that this indicator follows the same trend as the sold production. Even if stocked production records a significant increase in 2010 compared to 2009 (by 771%), the period stockage on each year analyzed is still insignificant compared to the value of sold production, a favourable aspect since the interest of the entity is to sell, not to stock products.

*The production of exercise or global production ( $Q_{ex}$ )* highlights the dimension of the commercial activity of a productive enterprise both in its relation with third parties (clients) through *sold production* and *variation of stocked production*, on the one hand, and in its relation to itself through *immobilized production*, on the other hand. The production of exercise is an indicator specific to industrial units, measuring the global volume of the activity developed. It includes the value of goods and services "realized" by the enterprise in order to be sold, stocked or used for own needs. In the case of industrial enterprises, the production of exercise consists of the turnover to which adds the stocked, respectively the immobilized production. If industrial enterprises record great discrepancies between the moment of fabrication and of facturing, as well as significant values of the stocked and immobilized production, then the production of exercise provides a more faithful image of the activity of the enterprise than the turnover.

During 2008-2010 the production of exercise is identical to the production obtained intended for delivery, since there is no immobilized production recorded. This immobilized production is recorded only in 2011, but in an insignificant sum (197 thousands lei), the trend of the evolution of production deriving still from the sold production.

*The commercial margin (MC)* determines the performances of entities functioning in the domain of distribution and marketing and performances resulted from the commercial activity within own stores in case of enterprises from other domains. The commercial activity is represented by the purchase and resale of goods, which are considered goods purchased in order to be resold as such. The commercial margin

has to be dealt with gradually, according to the type of sales policy promoted by the enterprise and the type of the commercial activity.. From the Table 1, we can observe that the commercial margin follows an ascending evolution during the period in view, a significant increase being recorded in 2009 as compared to 2008, when the commercial margin doubles, due to increase of income from the sale of goods by 10% and decrease of expenses with goods by the same percent. One should also consider the fact that consequences of crisis could be felt in 2009, which either made a part of the population orient towards products purchased directly from the producer due to their purchasing power falling off, or it made income increase due to the appearance of a new brand of quality products (Gerovital, Aslavital). In the following years the commercial margin grows from one year to another, but against the background of greater increase of income from the sale of goods as compared to the rhythm of increase of expenses with goods.

*The industrial margin (MI)* represents the value newly created in the activity of production developed by an economic entity during a given period of time.. At the level of the productive entity the industrial margin contributes significantly in the formation of added value. From the Table 1 we can observe that the industrial margin maintains relatively constant in 2009 compared to 2008 (the index being 100,8%). This maintaining within parameters of the previous year took place against the background of decrease of the production of exercise (by 9,4%) through the sold production, but especially of intermediary consumptions (which decreased in a higher degree, by 16,3%). The industrial margin increases in the following two years (by 8% in 2010 compared to 2009 and by 11,6% in 2011 compared to 2010), due to the increase, approximately in the same degree, both of the production of exercise and of intermediary consumptions.

*The added value (VA)* expresses the increase or the plus value achieved by the entity by using factors of production in a transaction period. This increase in value, over the value of goods and services provided by third parties, is generated by activities of sale and marketing and consists of either the sum of the two margins, or the sum of earnings of factors directly or indirectly involved in the activity of the economic entity (employees and social organisms, the state, debtors, shareholders etc.). During the entire period analyzed, the added value formed by summing up the two margins, with greater share of contribution of the industrial margin compared to the commercial margin, follows an ascending evolution from one year to another, in relatively steady proportions in the last two years (by 11,3% in 2010 compared to 2009 and by 12,2% in 2011 compared to 2010).

*The result of exploitation (RExp)* appears as a result of rolling of flows of exploitation, including economic operations with specific, common and repetitive character. During the entire period analyzed, the result of exploitation takes the form of profit. However, this records a decrease in 2009 compared to 2008 against the background of greater decrease of the exploitation income (by 9,9%) as compared to the decrease of exploitation expenses (by 8,6%). In 2010, as compared to 2009, the exploitation profit decreases due to the higher rhythm of increase of exploitation expenses as compared to the exploitation income. The year 2011 brings a sudden change in the situation of the evolution of profit: it grows by 46,2% due to the greater rhythm of increase of exploitation income, as compared to exploitation expenses.

## **2. Correlative analysis of the dynamics of value indicators**

If we highlight correlations between the dynamics of the main indicators we can observe the way programs of production and marketing are grounded and also the way in which they are realized, as compared to programmed levels or to achievements from previous periods. On this basis, we can assess deviations (in absolute or in relative measures), their causes, but also provide measures to be taken in order to correct unfavourable situations. At the theoretical level, we can admit equality between all indicators presented, which shows the fact that, as related to a comparative base, there are steady proportions between elements that distinguish the given indicators, but such a situation cannot be met and it is not desirable, because, from one period to another, both quantitative and qualitative changes can be recorded between the elements that distinguish value volume indicators. The table 2 presents the main correlations between the dynamics of volume indicators

**Table 2:** Correlations regarding the dynamics and the static rate of volume indicators

Correlations/Rates	2008	2009	2010	2011
Correlations regarding the dynamics of volume indicators	-	$I_{QV} > I_{Qf}$	$I_{QV} < I_{Qf}$	$I_{QV} > I_{Qf}$
	-	$I_{Qf} = I_{Qex}$	$I_{Qf} = I_{Qex}$	$I_{Qf} < I_{Qex}$
	-	$I_{VA} > I_{Qex}$	$I_{VA} < I_{Qex}$	$I_{VA} < I_{Qex}$
The ratio between sold production and obtained production intended for delivery ( $Q_v / Q_f$ )	0.946	0.997	0.97	0.992
The ratio between obtained production intended for delivery and production of exercise ( $Q_f / Q_{ex}$ )	1	1	1	0.998
The ratio between added value and production of exercise ( $VA / Q_{ex}$ )	0.42	0.47	0.468	0.460

Source: Personal processing

On analyzing correlations between value indicators of the volume of activity, we can observe that the years 2009 and 2011 recorded an increase of the degree of valorification of production ( $I_{QV} > I_{Qf}$ ) against the background of reduction of the stocked production. The year 2010 records a reduction of the degree of valorification, because in this year stocked production records a superior rhythm of increase as compared to 2009. The fact doesn't have strong negative consequences because, even if growing very much in relation to the pervious years, stocked production records insignificant values compared to the sold production. Resources in order to improve performances could be find by analyzing the correlation between the index of added value and the index of the production of exercise, which fall into the ratio of  $I_{VA} < I_{Qex}$  in 2010 and 2011, meaning that in these years intermediary consumptions from third parties recorded higher increases than the production of exercise. Only the year 2009 records a favourable correlation, as in that year intermediary consumptions decreased more strongly. However, a closer analysis of the static ratio proves that the degree of valorification of production is rather high (close to 100%), while the added value is by about 50% over the value of intermediary consumptions from third parties.

### 3.The analysis of the net turnover – the main indicator of volume of activity

The net turnover represents the total income obtained from the commercial activity (through sale of goods manufactured) of an enterprise during a certain period of time. Certain authors assert that the turnover should represent about 85% of the exploitation income and at least 75% of the total income of the economic entity, whereas in what concerns the dynamics, it should present a tendency of real increase in order to ensure development and consolidation of the strategic position of the enterprise (Mironiuc, M., 2006: 59). These indicators reflecting the level of the turnover are also called operational indicators (Niculescu, M., 1997: 229), and are presented and calculated in the Table 3.

**Table 3:** Operational indicators of analysis of the turnover

Indicators	2008	2009	2010	2011
Net turnover $CAN=Q_V+V_{VM}+VS-R_a$	89850	86821	95929	110891
Expenses from the base activity (thousands lei)	33482	23895	29894	35670
Expenses from auxiliary activities (thousands lei)	0.00	0,00	0.00	0.00
Sale expenses (thousands lei)	25759	29445	30618	34576
Variable expenses (CV) (thousands lei)	59241	53340	60512	70246
Indirect production expenses (thousands lei)	6478	4.883	5.976	6.240
General administration expenses (thousands lei)	21303	20.757	23.037	24.922
Fixed expenses (CF) (thousands lei)	27781	25640	29013	31162
Ratio of variable expenses $R_v = \frac{CV}{CAN}$	0.66	0.61	0.63	0.63
Critical turnover $CA_{min} = \frac{CF}{1-R_v}$	81709	65744	78414	84222
Raw profit associated with turnover	8141	21077	17515	26669
Index of net turnover in current prices (chain-based) (%)	-	96,6	110,5	115,6
Mean rhythm of turnover increase (the period 2008-2011) $\bar{R} = \left( n-1 \sqrt[n-1]{\frac{CAN_n}{CAN_0}} - 1 \right) \cdot 100$	$\bar{R} = \left( 3 \sqrt[3]{\frac{110891}{89850}} - 1 \right) \cdot 100 = (\sqrt[3]{1,2342} - 1) \cdot 100 =$ $= (1,0727 - 1) \cdot 100 = 7,27\%$ <p>The mean annual rhythm of increase for the entire period (2008-2011) is by 7,27 %</p>			
Index of critical turnover (chain-based) (%)	-	80,5	119,3	107,4
Index of raw profit associated with turnover (chain-based) (%)	-	258,9	83,1	152,3
Index of consumption prices from current period compared to the previous period (the source INSSE for the group "Hygiene articles and cosmetics") (%)	102,88	102,79	103,57	101,65
Deflated turnover	87335	84464	92622	109091

$CAN_{R\ n-m} = \frac{CAN_{crt\ n-m}}{I_{p\ n-m_0}} \times 100$				
Real rate of increase of turnover (%) $\Delta I_{CANReal} = \left( \frac{I_{CAN}}{I_p} - 1 \right) \cdot 100$	-	- 6,02	6,7	13,72
Indices of value of turnover in industry (the source INSSE domain "Fabrication of chemical substances and products") (%)	116,9	93,7	106,8	111,3

Source: Personal processing of data from the Account of Profit and Loss, Explanatory Note "Analysis of the exploitation result", of the economic entity analyzed and monthly Statistic Bulletins of the INSSE

By analyzing the evolution of the net turnover in current prices, we can observe it records a slow decrease in 2009 compared to 2008 (by 3,4%), but in the following years the situation improves and the turnover records increases by 10,5% in 2010 compared to 2009 and by 15,6% in 2011 compared to 2010. The dynamics of the turnover of the entity analyzed should be compared with the market dynamics, respectively to the dynamics of the sector of activity, in order to be relevant to establishing a strategy of development of the economic entity. If the sector is more dynamic than the economic entity, one can observe that the given enterprise will lose market interest, either due to the increase in superior rhythm of the volume of sales of the already existing competition, or due to the apparition of new competitors, or due to both causes combined. By comparing the index of the net turnover of the entity analyzed with the index of the value of turnover from the sector of activity in which it functions, we can observe that the situation is favourable, because even in the year when the turnover of the enterprise decreases, the sector records a stronger decrease (by an index of 93,7%), while in the other years the increase of the turnover of the enterprise is bigger than the sector increase, the entity being able to expand its business log.

The analysis of the critical turnover also points out relevant aspects in what regards the threshold of profitability of the enterprise, represented by that level of sales income necessary to fully cover exploitation expenses. At this level, the profit is equal to zero, while total expenses in relation to the volume of activity are grouped in fixed and variable expenses. We can observe the net turnover decreases in 2009, but the aspect cannot be seen as unfavourable, because the economic entity covers expenses with a smaller turnover than in the previous year (by 20% smaller than the critical turnover of 2008), thus obtaining a raw profit associated with the turnover by 159% bigger than in the previous year. The same fact is to a great extent due to the reduction of variable and fixed expenses, while the mean ratio of variable expenses decreases from 0,66 in 2008, to 0,61 in 2009. In 2010, despite favourable evolutions, the critical turnover increases more than the net turnover, and the entity records smaller raw profit associated with the net turnover (by 17% compared to 2009), against the background of the increase of variable and fixed expenses and of the mean ratio of variable expenses (at 0,63). The year 2011 reflects a situation improved as compared to the previous year, since the increase rhythm of the net turnover (115,6%) is superior to the increase rhythm of the critical turnover (107,4%),

the raw profit associated with turnover recording significant increases compared to the previous year (by 52,3%), against the background of steady maintaining of the mean ratio of variable expenses.

Since the turnover is expressed in current prices, a correct assessment of facts requires the adjustment of nominative indicators (current values) to the inflation rate corresponding to the sector of activity in which the economic entity functions, so that later in time the own effort of the economic entity could be pointed out. The data can be compared in time by deflating the indicator (deflated turnover). At the level of the entity analyzed, we can observe that the index of consumption prices for the category of goods marketed by the enterprise (hygiene articles and cosmetics), doesn't record significant increases from one year to another, this is why the real turnover is very close to the level of nominative turnover, which reflects the fact that the economic entity has obtained an increase of turnover from one year to another based on its efforts to improve quality and diversify the choice of brands, while the sale price grows rather for economic reasons than due to inflation. The only year when the entity recorded a real decrease (of - 6,02%) of the turnover was 2009, due to the reduction of the nominative value of turnover, as well as to the growth of consumption prices for the group of specific products, however, as we already pointed out, the entire sector in which the economic entity analyzed activates was affected in that year. The next two years record a real increase of 6,7% in 2010 and of 13,7 % in 2011, for the entire period analyzed (2008-2011) the mean rhythm of increase of the turnover being of 7,27%.

#### **4.Strategies of increase of the performance of the enterprise**

The ways to improve the performance of the enterprise should come from two directions: minimizing efforts and maximizing effects, or surpassing of the rhythm of increase of expenses (efforts) by the rhythm of increase of the income (effects). Considering the observations displayed above, we can highlight the following possibilities of increasing the economic-financial performance of the enterprise:

- *Reduction (optimisation) of costs* based on diminishing material and live labour expenses by: use, as complete and efficient as possible, of existing capacity of production; introduction of new equipment and technology, superior in output; increase of the fund of time effectively used by elimination of time losses of any kind;; provision on schedule with raw materials and materials in quantity and quality adjusted to the process of production; optimum dimensioning of stocks of raw materials, products in course of execution and finished products; increase of the level of qualification of the working force;, through measures of enhancing the productivity of work;
- *The increase of the volume of production* represents an indirect way of enhancing the performance of activity, because it acts indirectly, by reducing costs, as fixed and slowly variable costs do not grow or grow in a rhythm which is inferior to the increase of the volume of production;
- *The achievement of an efficient structure of production* must be correlated to the market demands and must follow the assimilation of new products, with enhanced performances, as well as the improvement of the structure on qualities of production and the achievement of an ISO 9000 certificate. An efficient structure of production is reflected in the level of the mean rate of profitability;

- *The acceleration of the speed of rotation* of resources, respectively the shortening of the duration of a circuit also has positive effects upon profitability, due to the fact that we obtain a bigger volume of profit, without needing to increase also the volume of resources.
- *The use of the price indicator* stimulates enterprises in order to ensure and increase profitability, but this can only be achieved in correlation with the increase of the qualitative level and of the complexity/diversity of products.

## 5. Conclusions

For any manager, the level of results obtained represents the measure of efficiency of the activity developed, and a part of this measure stands in reflecting the volume of activity and following its tendencies in time and in relation to other partners from the respective market. The production exerts a decisive influence upon all sides of the economic activity; this segment of activity influences to a great extent the financial results of the economic entity. Starting from the importance of the objectives of the activity of production, these should be followed both on the total of the economic entity and on its subdivisions. The program of production has to be followed not only in long intervals (year, semester), but also in shorter periods: trimester, month, decade, days. One should also never ignore the achievement of production tasks in terms of brands and structure, but mostly in terms of quality, so that the offer should meet the market demand.

The entity analyzed in this paper managed to obtain favourable and increasing results even in the period of economic recession, due to the strategy of development implemented. This strategy consisted in the accent placed on production (by diversifying the range of brands and improving the quality of existing products, by involvement in the activity of innovation through launching of new products, by making investments in machinery and equipment), but also on distribution (by opening agencies, purchasing fabrication licence for products acknowledged on the market, advertising by sustained marketing activity, notoriety given by the quality of products and the accessibility of prices, attracting of new retail contracts both in the country and abroad, the growth of quality and qualification of employees).

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# ENTREPRENEURIAL ACTIVITY IN ROMANIA – A TIME SERIES CLUSTERING ANALYSIS AT THE NUTS3 LEVEL

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**Abstract:** *Entrepreneurship is an active field of research, having known a major increase in interest and publication levels in the last years (Landström et al., 2012). Within this field recently there has been an increasing interest in understanding why some regions seem to have a significantly higher entrepreneurship activity compared to others. In line with this research field, we would like to investigate the differences in entrepreneurial activity among the Romanian counties (NUTS 3 regions). While the classical research paradigm in this field is to conduct a temporally stationary analysis, we choose to use a time series clustering analysis to better understanding the dynamics of entrepreneurial activity between counties. Our analysis showed that if we use the total number of new privately owned companies that are founded each year in the last decade (2002-2012) we can distinguish between 5 clusters, one with high total entrepreneurial activity (18 counties), one with above average activity (8 counties), two clusters with average and slightly below average activity (total of 18 counties) and one cluster with low and declining activity (2 counties). If we are interested in the entrepreneurial activity rate, that is the number of new privately owned companies founded each year adjusted by the population of the respective county, we obtain 4 clusters, one with a very high entrepreneurial rate (1 county), one with average rate (10 counties), and two clusters with below average entrepreneurial rate (total of 31 counties). In conclusion, our research shows that Romania is far from being a homogeneous geographical area in respect to entrepreneurial activity. Depending on what we are interested in, it can be divided in 5 or 4 clusters of counties, which behave differently as a function of time. Further research should be focused on explaining these regional differences, on studying the high performance clusters and trying to improve the low performing ones.*

**Keywords:** *entrepreneurship; cluster analysis; time series; regional clustering*

**JEL classification:** *L26; C38; R11*

## 1. Introduction

Entrepreneurship is a relatively new field of interest in economics research, its emergence occurring in the second half of the 20<sup>th</sup> century. Before that period, most of the research focused on the large enterprises, as they were seen as the engine of economic growth and innovation (Faria et al., 2010).

Due to recent technological development and economic instability, small enterprises are now 99% of the total number of companies in the European Union, providing 2/3 of the jobs in the private sector (Dodescu and Badulescu, 2009), having therefore turned entrepreneurship into a significant and independent research field.

Our paper aims at highlighting the differences in entrepreneurial activity among the Romanian counties (NUTS 3 regions), by using a time series clustering analysis to better understanding the dynamics of entrepreneurial activity between counties.

The paper is organized as follows: in the first part we briefly review the literature on entrepreneurship as endogenous factor of regional development and, particularly, on previous findings related to the way that entrepreneurial activity clusters on certain regions.

We review main studies and their findings on several regional clusters, focusing on most recent researches. In the second part we present the research methodology and selection and definition of variables. The main part is assigned to presenting the analysis itself and its main findings concerning the groups identified as clustering the entrepreneurial activity within Romanian counties. Finally, we briefly conclude and draw main directions to continuing studies.

## **2. Overview on literature about entrepreneurial activity and its clustering**

An important reason for studying entrepreneurship is that economic growth is strongly correlated with an abundance of small, entrepreneurial firms (Glaeser et al., 2010) and the causal relationship between the two could bring important information regarding growth models.

Defining entrepreneurship has proven to be a complex endeavor, as there are many opinions as to what exactly an entrepreneur is, and where the line should be drawn between entrepreneurial and non-entrepreneurial activity. Some definitions focus on the innovative aspect of the new enterprise, such as the classical definition given by Schumpeter, i.e. "the doing of new things or the doing of things that are already being done in a new way" (Schumpeter, 1947:151), while other researchers choose to use a more broad definition and include in this field all new privately owned companies, the entrepreneur becoming a person that either works for himself or that starts a new company (Van Der Sluis et al., 2008:803), and some even think of entrepreneurship as a new factor of production, in addition to the classical land, labor and capital ones (Cuervo et al., 2007).

The field of entrepreneurship has been investigated from multiple perspectives and theoretical points of view. The first approaches were close related to the psychological theories, and investigated the entrepreneur as a person, trying to determine the general traits and characteristics that differentiated him from the other businesspersons. The focus later widened to include company characteristics and even regional and country characteristics. The main theoretical models in this field focused on one or more of these levels, and can be divided into Economic, Psychological, Socio-Cultural and Managerial approaches (Veciana, 2007).

Theories of regional development can be generally divided into two categories (Martin and Sunley, 1998): theories that believe regions will inevitably diverge, as a consequence of economies of scale and agglomeration, and theories that believe regions will eventually converge, and differences between them should reduce in time as a consequence of imitation and complementarities (Garofoli, 2002).

Studies have shown that entrepreneurial activity tends to cluster, or agglomerate in certain regions, and that this might lead to a divergence effect. The assumed origins of entrepreneurial clustering are lower costs, better amenities and human capital in some areas (Glaeser et al., 2010). Another factor is the diffusion of information and capital to other companies upstream and downstream (Khan and Ghani, 2004).

This “spillover effect” in entrepreneurship has been investigated and confirmed in several studies (Anselin et al., 1997; Montoro-Sánchez et al., 2011). For instance in the case of USA the effect seems to be positive and limited to a 50 mile (~80 km) radius around the Universities and Research and Development (R&D) centers, and transcending state boundaries (Anselin et al., 1997).

From this perspective our paper is a macro-economical level analysis under the Economical approach, investigating the possible causes of differential regional entrepreneurial development at a county level. From a theoretical standpoint we are hoping to find evidence in support of the Theory of the endogenous regional development, in the sense that we believe the differences in regional entrepreneurial activity could be attributed to characteristics of the regions themselves and more specifically to various spill-over effects of transferring knowledge from universities and R&D institutes to the private sector leading to increased innovation, as suggested by some authors (Karlsson et al., 2009).

An early approach to regional clustering sought to compare countries and groups of countries, however more recently the unit of analysis has become much smaller, focusing on regions within countries and even on metropolitan areas. This development is attributed to the discovery that inter-country variance is most of the time smaller than intra-country variance (Martin and Sunley, 1996).

Some studies have investigated the clustering of entrepreneurial activity within several countries, and as shown in Table 1, their results indicate that entrepreneurial activity is far from being homogeneous within countries.

**Table 1:** A selection of previous studies in the field

Study	Country	Analysis level	Results
Delgado et al., 2010	USA	171 units	Significant differences by region and sector
Glaeser et al., 2010	USA	4 regions	Significant differences by region and sector
Kronthaler, 2005	Germany	97 regions	Significant differences by region
Rocha and Sternberg, 2005	Germany	97 regions	Significant differences by region
Unger and Chico, 2004	Mexico	3 regions	Significant differences by region and sector

### 3. Research methodology

Previous studies regarding entrepreneurial clustering at a geographic level have generally been interested in static clustering; that is they investigated the clustering of regions at a certain time point.

In contrast with this methodology, we believe it would be more informative to perform a time series geographic clustering analysis.

#### 3.1 Variables investigated

In the following section we provide detailed information regarding our variables, chosen indicator and information sources.

### **3.1.1 Entrepreneurship**

We choose to use as a measure of entrepreneurship the total number of new companies that have been open in a certain time frame, as suggested by other researchers (Van Der Sluis et al., 2008) and as done in previous research regarding Romanian entrepreneurial activities (Sipos-Gug, 2012).

For this purpose we collected the data regarding the total number of new enterprises registered every year, in every county (NUTS3 region) in Romania for the past decade (2002-2012). The data were collected from the National Trade Registry and are publicly available (ONRC, 2013).

### **3.1.2. Population – regional entrepreneurial supply**

We are also interested in the “supply of entrepreneurs” (Glaeser et al., 2010) in every region, and so we decided to investigate the number of entrepreneurs per region population.

This indicator was calculated as the total number of companies newly registered in a year in every county divided by the total population of the said county in that year. This indicator is only an approximation of the actual entrepreneurial supply, as several companies might well be founded by the same individual; however it is the best indicator we could construct.

Data regarding population were obtained from the National Statistics Bureau, and are publicly available (INS, 2013).

### **3.1.3. Academic activity**

As academic research and activity is believed to play an important role in entrepreneurial clustering, we collected data regarding the number of Universities focused on research in every county, and the results are shown in Table X. The data were collected from the official Romanian Classification of Universities (Monitorul Oficial al României, 2011).

**Table 2:** The number of Universities focused on research in every county

NUTS3 Region	Number of Universities
Bucuresti	11
Cluj	4
Iasi	4
Timis	4
Brasov	2
Constanta	2
Dolj	2
Sibiu	2
Bihor	1
Galati	1
Mures	1

Source: Monitorul Oficial al României, no. 637/2011

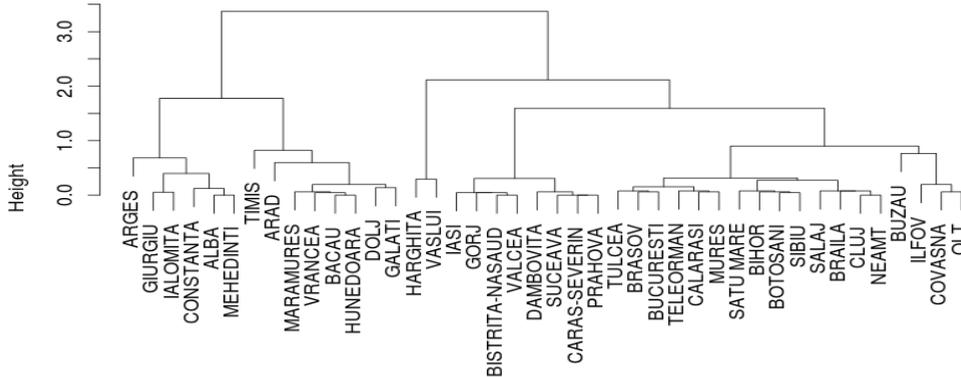
#### 4. Data analysis. Discussion and main findings

Data analysis was conducted using R 2.15.13. Cluster analysis was performed with the package pdc developed by Brandmaier (2011). While there are a high number of different methods proposed for cluster analysis of time series (Rani and Sikka, 2012), the PDC method is easy to use, equally reliable, and available freely as a R package.

##### 4.1. Cluster analysis A - entrepreneurial activity

The embedding dimension for the time series cluster analysis was chosen using the Minimum Entropy Heuristic (MinE) and set to 3.

Permutation distribution clustering (PDC) analysis was conducted with 3 embedding dimensions and 1 time dimension, and the resulting dendrogram is presented in Figure 1.



**Figure 1:** Dendrogram resulted from PDC of NUT3 Regions in function of yearly number of new enterprises (2002-2012)

We decided to choose the number of clusters as 5, as it seems to offer the best compromise between parsimony and obtaining detailed information with practical implications.

Table 3 shows the grouping of NUTS3 regions into clusters based on the evolution of new privately owned companies over the investigated time period. Regions marked with an “\*” have at least one Research University in them.

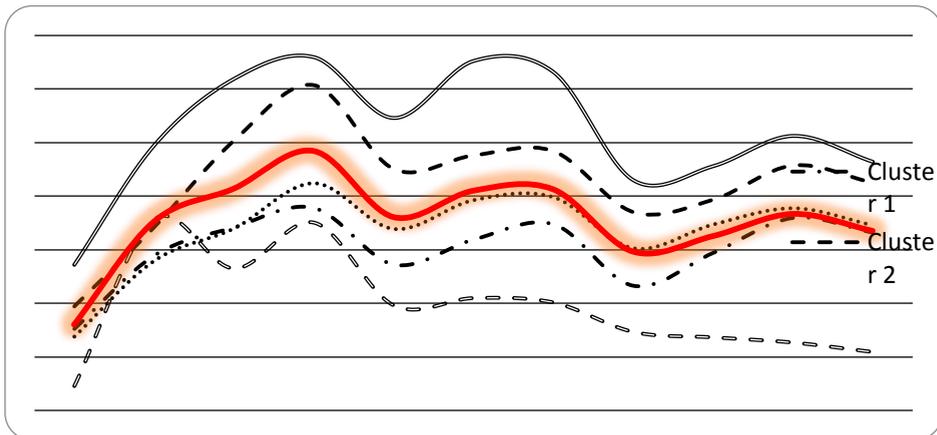
In order to test whether the presence of a Research University could be an explanation for the differences between clusters, we resorted to a chi-squared crosstab test. The resulting statistic  $\chi^2(4) = 2.771$  has an associated p value of 0.597, therefore we cannot claim that there are significant differences between clusters based on the presence of the universities.

In order to more easily describe the clusters we resorted to a graphical representation of the cluster centers as a function of time. From Figure 2 we can easily notice that Cluster A5 has a constant higher number of new companies per year than the other clusters. Cluster A2 seems to have an above average entrepreneurial activity, while Cluster A4 fits the average national distribution. Cluster A1 seems to have a slightly below average entrepreneurial activity, and then reach the average in 2012. Cluster A3 starts slightly below average, and after

reaching the average in 2003 shows a strong decline in entrepreneurial activity up to 2012.

**Table 3:** Clustering of NUTS3 regions as a function of yearly number of new enterprises (2002-2012)

Cluster A1	Cluster A2	Cluster A3	Cluster A4	Cluster A5	
Alba	Arad	Harghita	Bistrita-Nasaud	Bihor*	Ilfov
Arges	Bacau	Vaslui	Caras-Severin	Botosani	Mures*
Constanta*	Dolj*		Dambovita	Braila	Neamt
Giurgiu	Galati*		Gorj	Brasov*	Olt
Ialomita	Hunedoara		Iasi*	Bucuresti*	Salaj
Mehedinti	Maramures		Prahova	Buzau	Satu Mare
	Timis*		Suceava	Calarasi	Sibiu*
	Vrancea		Valcea	Cluj*	Teleorman
				Covasna	Tulcea



**Figure 2:** Graphical representation of cluster centers in Clustering A

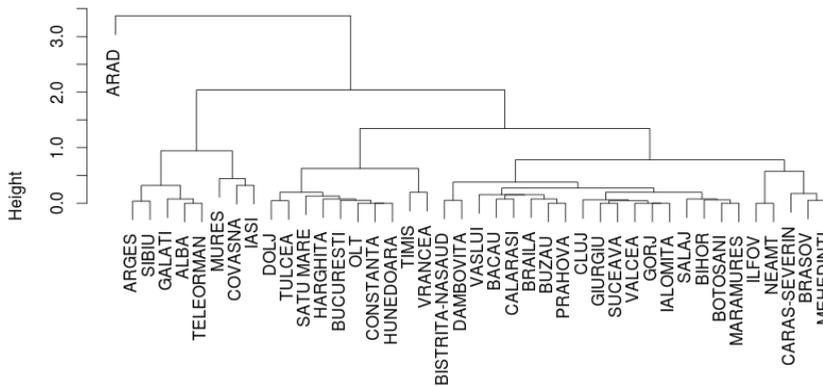
The distance between clusters varies from one year to another; however it doesn't seem to be influenced by the economic crisis and on the long term the low performance cluster seems to diverge more and more from the rest.

#### 4.2. Cluster analysis B - "entrepreneurial supply"

The rate of new privately owned companies per 1000 inhabitants was then analyzed using PDC in order to identify clusters of entrepreneurs.

The embedding dimension for the time series cluster analysis was chosen using the Minimum Entropy Heuristic (MinE) and set to 3.

Permutation distribution clustering analysis was conducted with 3 embedding dimensions and 1 time dimension, and the resulting dendrogram is presented in Figure 3.



**Figure 3:** Dendrogram resulted from PDC of NUT3 Regions in function of yearly number of new enterprises (2002-2012) per 1000 inhabitants

We decided to choose the number of clusters as 4, as it seems to offer the best compromise between parsimony and obtaining detailed information with practical implications.

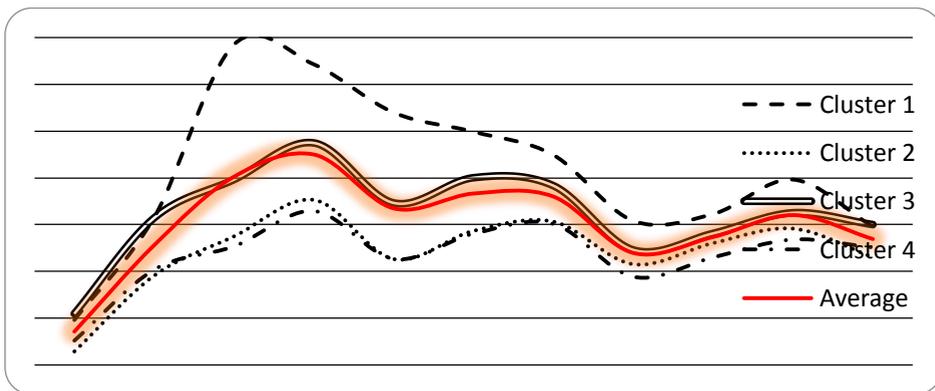
Table 4 shows the grouping of NUTS3 regions into clusters based on the evolution of the rate of new privately owned companies per 1000 inhabitants over the investigated time period. Regions marked with an “\*” have at least one Research University in them. In order to test whether the presence of a Research University could be an explanation for the differences between clusters, we resorted to a chi-squared crosstab test. The resulting statistic  $\chi^2(3) = 4.812$  has an associated p value of 0.307, therefore we cannot claim that there are significant differences between clusters based on the presence of the universities.

**Table 4:** Clustering of NUTS3 regions as a function of yearly number of new enterprises (2002-2012) per 1000 inhabitants

Cluster B1	Cluster B2	Cluster B3	Cluster B4	
Arad	Alba	Bucuresti*	Bacau	Gorj
	Arges	Constanta*	Bihor*	Ialomita
	Covasna	Dolj*	Bistrita-Nasaud	Ilofov
	Galati*	Harghita	Botosani	Maramures
	Iasi*	Hunedoara	Braila	Mehedinti
	Mures*	Olt	Brasov*	Neamt
	Sibiu*	Satu Mare	Buzau	Prahova
	Teleorman	Timis*	Calarasi	Salaj
		Tulcea	Caras-Severin	Suceava
		Vrancea	Cluj*	Valcea

Cluster B1	Cluster B2	Cluster B3	Cluster B4	
			Dambovită	Vaslui
			Giurgiu	

In order to more easily describe the clusters we resorted to a graphical representation of the cluster centers as a function of time. From Figure 4 we can easily notice that Cluster 1 has a rapid increase in the rate of new enterprises per 1000 inhabitants from 2002 to 2005, and then an above average but approaching average performance up to 2012. Cluster 3 has an average and slightly above average performance. Clusters 2 and 4 have a below average performance, with Cluster 2 slightly outperforming Cluster 4 over the majority of the investigated period.



**Figure 4:** Graphical representation of cluster centers in Clustering B

The distance between clusters varies from one year to another and like in the case of the clusters of section 4.1; it also doesn't seem to be influenced by the economic crisis. However in this case on the long term all the clusters seem to converge.

## 5. Conclusions and implications

Following the conclusions of similar studies of entrepreneurial clustering (see Table 1), we have also shown Romania is far from being one homogenous area when it comes to entrepreneurs and entrepreneurial supply. Some regions have a much higher entrepreneurial activity than others, and this tendency seems to be rather stable in time.

Therefore study also brings some information regarding the question of whether regional clustering is accompanied by a divergence or a convergence effect, which has been an active debate in current research (Nijkamp and Abreu, 2009). It would seem that from a time series point of view, there are alternating points of convergence and divergence. Further analysis is required; however from Figures 2 and 4 one can see this alternating pattern. Furthermore, while it would seem that on the long term convergence occurs regarding the supply of entrepreneurs, in the case of entrepreneurial activity as a whole one can actually see a tendency for divergence. We can conclude therefore that while convergence needs further study, it doesn't seem to be a linear function of time.

We could not replicate the results of previous studies regarding a relationship between entrepreneurial activity and the presence of a higher education institution research programs (Anselin et al., 1997; Montoro-Sánchez et al., 2011). This might suggest that in the case of Romania the spill-over effect might not be as strong in the case of other countries, however further research is needed.

Regarding the relationship between entrepreneurial activity and the “supply of entrepreneurs” proposed by some authors (Glaeser et al., 2010), the fact that the counties cluster differently on entrepreneurial supply than they do on general activity, might suggest that in our case this relationship is weak, however its significance was not tested, and further studies will be required before we can draw any conclusions. Our research has several implications for further research and policy making.

First of all, cluster analysis is primarily an exploratory tool, and as such we cannot assert as to why these differences have occurred, however now that we have identified them we can use this model to guide further research, such as case study or attempt for causal model building.

Secondly, future policy should take these clusters into account. They seem to be rather stable in time and as such very likely would require external intervention in order to prevent low performance clusters from remaining at the current level, or even from diverging further from the average. While the opinion regarding the possibility and success of cluster based policy change is disputed (Glavan, 2008), the free market mechanism alone, at least for the investigated period and in the case of Romania, does not seem to reduce the disparity between regions.

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# COMPANIES' FINANCIAL STATUS AND THE BUSINESS TURNOVER ON EMERGENT MARKETS: THE ROMANIAN CASE

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**ABSTRACT** *The aim of this study is to test for the relevance of some financial ratios as descriptors of companies' financial status in explaining the evolutions of their business turnover. We are considering a data sample of 36 companies quoted on the Romanian capital market for a time span between 2007 and 2010. The predictive capacity of some significant financial ratios for the companies' business turnover is analyzed and a methodology for the evaluation of their financial status based on these ratios is advanced. We found that the predictive capacity of some relevant financial ratios for the dynamic of some quoted companies' turnovers is non-uniform across the two conventional sectors in which we have grouped these companies according to their field of activity. Based on these results, an synthetic indicator of the companies' financial status is constructed at the level of each individual sector and the non-linear correlation between this indicator and the business turnover is tested.*

**Key words:** financial ratios, financial status, quoted companies

*JEL classification:* M41

## **Introduction**

The study aims to reveal the potential connections between some relevant descriptors of companies' financial status and their results for some quoted Romanian companies in order to fill a gap in the empirical evidences of the financial status' impact on companies' performances in emergent markets. Due to the institutional, structural and functional particularities of these markets, it is expected to provide some insights about the involved transmission channels and to highlight some specificity of these. In the next section, a methodology designed to evaluate the predictive capacity of the selected financial ratios for the business turnover' dynamic and also to construct of a synthetic indicator of the financial status is advanced. Section 3 describes the data while Section 4 reports the results. Some conclusions are dropped and some further analytical directions are indicated in the last section.

## **Methodological framework**

For a preliminary evaluation of the predictive capacities of the financial ratios, we construct a binary variable designed to reflect the cases in which the companies are achieving better performances in terms of relative business turnover comparing with the averages outcomes in their sector:

$$BT^{binary}_{it} = \begin{cases} 1 & \text{if } BT_{it} > \overline{BT}_{jt} \\ 0 & \text{otherwise} \end{cases} \quad (1)$$

Here  $BT_{it}$  is the (natural logarithm) business turnover of the company “i” in the current period “t” while  $\overline{BT}_{jt}$  stands for the average turnover of the sector “j”.

The main properties of the binary variable are reported in Table 1. It appears that these data are displaying a relatively significant degree of dispersion, with “fat tails” effects. This implies that the individual companies from each sector are behaving in a distinctive fashion in terms of their business outcomes. Thus, the choice of methodology should account for the distinctive patterns of business turnovers at the level of each sector.

**Table 1:** The main statistic characteristics of the business turnover (binary)

	Sector “A”	Sector “B”
Std. Dev.	0.50	0.49
Skewness	-0.19	0.41
Kurtosis	1.04	1.17
Jarque-Bera	10.67	13.43
Probability	0.00	0.00
Observations	64	80

Source: own processing

Such specification of the binary variable allows for the identification of “over” and respectively “under” performances cases and for a further check of the capacity of financial ratios to discriminate between such cases. In other words, such frameworks allow an investigation of the connections between the companies’ financial status and their economic performances.

The next step implies the running of a binary equation with the next specification (with  $\mathbf{X}$  being the set of the considered explanatory financial ratios):

$$\Pr(BT^{binary}_i = 1 | X_i, \beta) = 1 - F(-X'_i \beta) \quad (2)$$

Here  $F$  is a continuous, strictly increasing function that takes a real value and returns a value ranging from zero to one.

In order to account for the mentioned heterogeneity of the data, we are using a particular specification of cumulative distribution function  $F$  based on the *extreme value distribution*:

$$\Pr(BT^{binary}_i = 1 | X_i, \beta) = 1 - (1 - \exp(-e^{(-X'_i \beta)})) = \exp(-e^{(-X'_i \beta)}) \quad (3)$$

If the considered financial ratios appear to be relevant for the prediction of the companies’ relative performances, then is possible to aggregate them in a synthetic descriptor of their financial condition and to further test the connections between such aggregate and the evolutions of business turnover.

A critical issue in the construction of such descriptor concerns the selection of the corresponding weights of financial ratios. At least three approaches can be considered: 1) the construction of an equiponderate measure with equal weights for each ratio; 2) the assignation of some ad hoc weights to reflect the perceived relative importance of the individual ratios in the description of the company financial status and, respectively, 3) the involvement of an multi-factorial analysis. Since the first two approaches can be affected by subjective biases, we are choosing to construct the synthetic descriptor of the financial status through a *principal components analysis*. *Principal components analysis* is a variable reduction procedure. Thus, it is similar in many respects to exploratory factor analysis but there are significant conceptual differences between these two procedures. Perhaps, one of the most important differences deals with the assumption of an underlying causal structure: factor analysis assumes that the co-variation in the observed variables is due to the presence of one or more latent variables (*factors*) that exert causal influence on these observed variables. In contrast, principal component analysis makes no such special assumptions about an underlying causal model and permits the analysis of more various empirical situations. Its central idea is to reduce the dimensionality of a set of interrelated variables, while retaining as much as possible from the variation which is present in dataset. The procedure is currently widely applied from climatology to economics, genetics, psychology or quality control (see for details Jolliffe, 2002).

This type of analysis models the variance structure of a set of observed variables by using linear combinations of the variables. These linear combinations, or *components*, may be used in subsequent analysis, and the combination coefficients, or *loadings*, may be used in interpreting the components.

The *principal components* of a set of variables are obtained by computing the eigenvalue decomposition of the observed variance matrix. The first *principal component* is the unit-length linear combination of the original variables with maximum variance. Subsequent *principal components* maximize variance among unit-length linear combinations that are orthogonal to the previous components.

From the singular value decomposition, a  $(n \times p)$  data matrix  $Y$  of rank  $r$  could be represented as:

$$Y = UDV' \quad (4.)$$

$U$  and  $V$  are orthonormal matrices of the left and right singular vectors, and  $D$  is a diagonal matrix containing the singular values.

More generally, one could write:

$$Y = AB' \quad (5)$$

$A$  is an  $(n \times r)$ , and  $B$  is a  $(p \times r)$  matrix, both of rank  $r$ , and

$$A = n^{\frac{\beta}{2}} U D^{1-\alpha}$$

$$B = n^{\frac{-\beta}{2}} V D^{\alpha} \quad (6)$$

Thus  $0 \leq \alpha \leq 1$  is a factor which adjusts the relative weighting of the left (observations) and right (variables) singular vectors, and the terms involving  $\beta$  are scaling factors where  $\beta \in \{0, \alpha\}$ .

The basic options in computing the scores  $A$  and the corresponding loadings  $B$  involve the choice of (loading) weight parameter  $\alpha$  and (observation) scaling parameter  $\beta$ .

In the *principal components* context, let  $\Sigma$  be the cross-product moment (*dispersion*) matrix of  $Y$ , and let perform the eigenvalue decomposition:

$$\Sigma = L\Lambda L' \quad (7)$$

Here  $L$  is the  $p \times p$  matrix of eigenvectors and  $\Lambda$  is the diagonal matrix with eigenvalues on the diagonal. The eigenvectors, which are given by the columns of  $L$ , are identified up to the choice of sign. It could be observed the facts that since the eigenvectors are by construction orthogonal,  $L'L = LL' = I_m$ .

There could be done some settings as  $U = YLD^{-1}$ ,  $V = L$ ,  $D = (n\Lambda)^{\frac{1}{2}}$ , so that:

$$\begin{aligned} A &= n^{\frac{\beta}{2}} YLD^{-\alpha} \\ B &= n^{-\frac{\beta}{2}} LD^{\alpha} \end{aligned} \quad (8)$$

$A$  can be interpreted as the *weighted principal components scores*, and  $B$  as the *weighted principal components loadings*.

Others detail of this procedure concerns an appropriate choice of the weight parameter  $\alpha$  and the scaling parameter  $\beta$  through which different *scores* and *loadings* with various properties could be constructed.

If the loadings of the first principal component are “closely enough” (i.e. there is not a disproportioned estimation of the relative importance of the individual financial ratios) then this component can be considered as an indicator of the companies’ financial status.

Such indicator can be further used in order to analyse the (short-run) impact of the changes in financial status on companies’ turnover and to highlight the potential structural changes in the involved linkages. Due to the existence of some important distinctions between sectors, the methodology should be distinctively applied for each individual sector.

An important issue of this evaluation concerns the fact that there are not, at least from an *ex ante* point of view, enough reasons to consider that the connections between financial status and business turnover have a linear nature. In fact, is more plausible to consider that these variables are linked in a non-linear fashion due to the complex involved causality. Thus, it is more adequately to check for the existence of such non-linear transmission channels. A possible way to perform such check is to consider the possibility of a non-linear co-trending linkage between the variables. Such nonlinear co-trading can appear when one or more linear combinations of the time series are stationary about a linear trend or a constant; hence, the series have common nonlinear deterministic time trends. The corresponding test is based on the eigenvalues of matrices constructed from the partial sum of the variables. It is nonparametric, since the non-linear trends and serial correlation processes do not need to be formally specified and is related to the Kwiatkowski et al. (1992) stationarity test for a univariate time series. There are at least two motivations for the construction of such a test (for a more detailed discussion about the relevance of this issue, see Bierens, 2000). Firstly, some long series perceived as unit root processes are displaying in fact a behavior more in accordance with a nonlinear

trend stationary hypothesis. Secondly, only few series that are not unit root processes still behave like co-integrated processes, in that the series move together over time in a similar way. But co-integration is only possible for unit root processes, thus, another approach is necessary.

The test statistic for the existence of such co-trending relationship as proposed by Bierens (2000), is  $\lambda_r$  for  $r = 1$  through  $k$ , where  $r$  is the number of co-trending vectors under the null, and  $k$  is the number of variables. The alternative hypothesis is that there are  $r - 1$  co-trending vectors. The test procedure also gives estimates for the co-trending vector parameters. More analytical, let  $y_t$  being the demeaned and possibly de-linear-trended vector of variables, and define:

$$\hat{M}_1 = \left( \frac{1}{n} \right) \sum_{t=1}^n \hat{F} \left( \frac{t}{n} \right) \hat{F} \left( \frac{t}{n} \right)^T,$$

$$\hat{F}(x) = \left( \frac{1}{n} \right) \sum_{t=1}^{\lfloor nx \rfloor} y_t, \text{ if } x \in \left[ n^{-1}, 1 \right], \hat{F}(x) = 0 \text{ if } x \in \left[ 0, n^{-1} \right]$$

$$\hat{M}_2 = \left( \frac{1}{n} \right) \sum_{j=s}^n \left( \sum_{j=0}^{s-1} \frac{1}{s} y_{t-j} \right) X \left( \sum_{j=0}^{s-1} \frac{1}{s} y_{t-j} \right)^T \quad (9)$$

Then it is solve:

$$\left| \hat{M}_1 - \lambda \hat{M}_2 \right| = 0 \quad (10)$$

Taking the ordered solutions of this, the test statistics are calculated as:  $n^{1-\alpha} \hat{\lambda}_r$ .

## Results and comments

Table 2 shows the estimated binary equations parameters. One of the most striking results appears to be the clear inter-sectors cleavage in the existing associations between the considered financial ratios and the business turnover. While for sector "A" all the corresponding coefficients appears to be statistically significant, for sector "B" only the coefficient of the fixed-to-total assets ratio is relevant. Thus, for sector "B" the model should be re-specified by dropping out the non-relevant explanatory variables and including others. Since the companies from this sector are typically characterized by an disequilibrium at the level of the ratios between their own and, respectively, borrowed financial resources, an appropriate choice of such alternatively explanatory variable can be for instance the total equity plus short-term liabilities-to-total liabilities ratio as a proxy of the companies' financial structure. Indeed, accordingly to the results reported in the last column of Table 2 this ratio is together with the fixed-to-total assets ratio negatively and statistic significantly associated with the business turnover in sector "B". It can be argued that the companies from sector "B" are more sensitive to the need for borrowed financial resources since their own resources are frequently insufficient to sustain the investments programs and the business expansion. And, as Clementi and Hopenhayn (2006), as well as Almeida and Campello (2001), argue, borrowing constraints have important implications for firm growth and survival. One of the key

arguments is that such constraint arises as a feature of the optimal long-term lending contract, and that such constraints relax as the value of the borrower's claim to future cash-flows increases. A similar line of argumentation is considered in Gilchrist and Himmelberg (1994) which found evidences that for firms with only limited access to capital markets (as indicated by lack of participation in public debt markets) investments (and, correlatively, the engaged volume of financial resources) appears to be "excessively" sensitive to fluctuations in cash flow.

**Table 2:** Binary regression estimations

<b>Variable</b>	<b>Sector "A"</b>	<b>Sector "B" (first model)</b>	<b>Sector "B" (second model)</b>
<i>Fixed to total assets ratio</i>	3.99** (1.71)	1.21** (0.53)	2.02** (0.92)
<i>Current to total assets ratio</i>	5.73*** (1.96)	-0.70 (0.70)	
<i>Total equity to total liabilities ratio</i>	-6.43*** (2.13)	-0.96 (0.74)	
<i>Operating result to total assets ratio</i>	11.72** (5.35)		
<i>(Total equity+ short-term liabilities) / total liabilities</i>			-1.63** (0.75)
Akaike info criterion	0.85	1.37	1.32
Schwarz criterion	0.99	1.41	1.38
Hannan-Quinn criter.	0.91	1.42	1.34
Avg. log likelihood	-0.36	-0.64	-0.63

Source: own processing

Also, for sector "A", these results highlight that the largest impact on business turnover is exercised by operating results-to- total assets while the smallest one is corresponding to the fixed-to-total assets ratio. The total equity- to -total liabilities ratio appears to have a negative impact on short-run turnover dynamic as reflecting the importance of a *financial leverage effect* for the companies from this sector. The binary equation also allows an estimation of the model predictor capacity through the so-called *classification table*. The fraction of observations that are correctly predicted is termed *sensitivity*, while the fraction of observations that are correctly predicted is labelled as *specificity*. The content of such classification is displayed in Table 3 with prediction results based upon expected value calculations.

**Table 3:** Expectation-Prediction Evaluation for Binary Specification  
Sector "A"

	Estimated Equation			Constant Probability		
	BT <sup>binary</sup> dummy=0	BT <sup>binary</sup> dummy=1	Total	BT <sup>binary</sup> dummy=0	BT <sup>binary</sup> dummy=1	Total
E(BT <sup>binary</sup> = 0)	21.29	7.51	28.81	13.14	15.86	29
E(BT <sup>binary</sup> = 1)	7.71	27.49	35.19	15.86	19.14	35
Total	29	35	64	29	35	64
Correct	21.29	27.49	48.78	13.14	19.14	32.28
% Correct	73.42	78.53	76.22	45.31	54.69	50.44
% Incorrect	26.58	21.47	23.78	54.69	45.31	49.56
Total Gain*	28.11	23.84	25.78			
Percent Gain**	51.4	52.62	52.01			
Hosmer-Lemeshov Statistic	5.26		Prob. Chi-Sq(8)		0.73	

Sector "B"

	Estimated Equation			Constant Probability		
	BT <sup>binary</sup> dummy=0	BT <sup>binary</sup> dummy=1	Total	BT <sup>binary</sup> dummy=0	BT <sup>binary</sup> dummy=1	Total
E(BT <sup>binary</sup> = 0)	29.86	17.58	47.44	28.80	19.20	48.00
E(BT <sup>binary</sup> = 1)	18.14	14.42	32.56	19.20	12.80	32.00
Total	48.00	32.00	80.00	48.00	32.00	80.00
Correct	29.86	14.42	44.27	28.80	12.80	41.60
% Correct	62.21	45.05	55.34	60.00	40.00	52.00
% Incorrect	37.79	54.95	44.66	40.00	60.00	48.00
Total Gain*	2.21	5.05	3.34			
Percent Gain**	5.52	8.42	6.97			
Hosmer-Lemeshov Statistic	11.45		Prob. Chi-Sq(8)		0.18	

Notes: \*-Change in "% Correct" from default (constant probability) specification; \*\*-Percent of incorrect (default) prediction corrected by equation; For Goodness-of-Fit Evaluation tests: Grouping based upon predicted risk (*randomized ties*). Success if probability is higher than 80%.

Source: own processing

In the lower right-hand table, we can compute the expected number of  $BT^{binary} = 0$  and  $BT^{binary} = 1$  observations for a model estimated with only a constant. For this restricted model,  $E(BT^{binary} = 0)$  is computed as  $n(1-p)$ , where  $p$  is the sample proportion of  $BT^{binary} = 1$  observations. A classification is labelled as "correct" when

the predicted probability is less than or equal to the cut-off (80% in our estimation) and the observed  $BT^{binary} = 0$ , or when the predicted probability is higher than the cut-off and the observed  $BT^{binary} = 1$ .

Overall, the estimated model predicts for sector "A" 76.22% of the observations (73.42% of the observations with dependent = 0 and 78.53% of the observations with dependent = 1) correctly. It appears that the levels of *sensitivity* and, respectively, *specificity* for our model are almost the same, implying that it can discriminate both „extreme” and „regular” cases. The gain in the number of correct predictions obtained by moving from the right table to the left table provides a measure of the predictive ability of our model. Roughly, there is in the case of sector "A", an improvement of 52.01% over the constant probability model with our estimation. The *Goodness-of-Fit* tests (*Hosmer-Lemeshow*) compare the expected fitted values to the actual values by group. If these differences are "small enough", the model is fitting the data adequately. The values of these tests, also reported in Table 3, suggest that this is the case with the binary specification for sector "A".

However, for sector "B" the predictive capacity of the considered financial ratios is poorer. In the case of this sector, the re-specified model predicts overall correctly only 55.34% from the observations (62.21% of the observations with dependent = 0 and 45.05% of the observations with dependent = 1). Also, the improvement over the constant probability model is far lower (only 6.97%). Finally, the value of the *Hosmer-Lemeshow* suggests that even the re-specified model predicts less adequately the data comparing with the case of sector "A".

Based on these preliminary results, it can be argued that the companies from the two sectors are operating in specific business conditions and with different structural and functional elements. Thus, the impact exercised on the evolution of their business turnover by the financial conditions appears to be a distinctive one with particular transmission channels involved.

**Table 4:** Principal components analysis

Sector "A"

Eigenvalues: (Sum = 4, Average = 1)

Number	Value	Difference	Proportion	Cumulative Value	Cumulative Proportion
1	3.12	2.67	0.78	3.12	0.78
2	0.45	0.07	0.11	3.58	0.89
3	0.38	0.34	0.10	3.96	0.99
4	0.04	---	0.01	4	1

*Eigenvectors (loadings):*

Variable	PC			
	1	PC 2	PC 3	PC 4
<i>Fixed to total assets ratio</i>	0.50	-0.65	-0.04	0.57

<i>Current to total assets ratio</i>	0.47	0.65	-0.53	0.28
<i>Total equity to total liabilities ratio</i>	0.55	-0.24	-0.22	-0.77
<i>Operating result to total assets ratio</i>	0.47	0.32	0.82	0.01

Sector "B"

*Eigenvalues: (Sum = 4, Average = 1)*

Number	Value	Difference	Proportion	Cumulative Value	Cumulative Proportion
1	1.96	1.92	0.98	1.96	0.98
2	0.04	---	0.02	2.00	1.00

*Eigenvectors (loadings):*

Variable	PC 1	PC 2
RAI	0.71	-0.71
RAC	0.71	0.71

Notes: Computed using: Ordinary (un-centered) correlations; all possible components extracted.

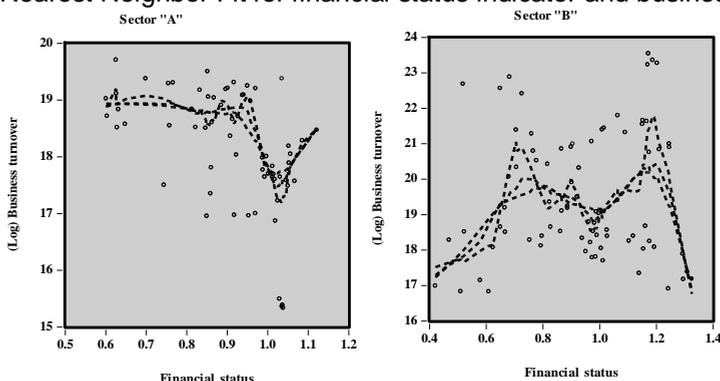
Source: own processing

The first section of Table 4 summarizes the eigenvalues, showing the values, the forward difference in the eigenvalues and the proportion of total variance explained. Since we are performing principal components on a correlation matrix, the sum of the scaled variances for the four (two in the case of sector "B") explanatory ratios used to describe the financial conditions for the companies included in sector "A" is equal to 4 (respectively 2 in the case of sector "B"). The first principal component accounts for 78% of the total variance of (98% in the case of sector "B"), while the second accounts for 11% (2%) of the total. The first two components account for over 89% (100%) of the total variation.

For both sectors, the second section describes the linear combination coefficients. It can be noticed that the first principal component (labelled "PC1") is a roughly-equal linear combination of all four (two) financial ratios. Thus, in both cases, it might reasonably be interpreted as a global indicator of the companies' financial status. Once such indicator of financial status is constructed based on principal components methodology, it is possible to carry out a more detailed analysis.

The scatter plot from Figure 1 suggests that the relationship between the financial status indicator and business turnover is a non-linear one (somehow with a "U" style shape for sector "A") and display a distinctive pattern for each sector. So, it is necessarily to consider a non-linear approach to the analysis of this relationship.

**Figure 1: Nearest Neighbor Fit for financial status indicator and business turnover**



Notes: Polynomial degree:1; Bandwidth (sample fraction):0.3;Local weighting (*Tricube*); Evaluation method: *Exact*  
 Source: own processing

The panel unit root tests from Table 5 indicates that the business turnover variable for sector "A" can be viewed as a unit root process while for the rest of the variables the evidences are less clear.

**Table 5: Panel unit root tests**

	<b>Sector "A"</b>		<b>Sector "B"</b>	
	<i>Financ</i> <i>ial</i> <i>status</i> <i>indicat</i> <i>or</i>	<i>Busine</i> <i>ss</i> <i>turnov</i> <i>er</i>	<i>Financ</i> <i>ial</i> <i>status</i> <i>indicat</i> <i>or</i>	<i>Busine</i> <i>ss</i> <i>turnov</i> <i>er</i>
<i>Null: Unit root (assumes common unit root process)</i>				
Levin, Lin & Chu t*	-43.84 (0.00)	-2.95 (0.00)	-30.82 (0.00)	-10.37 (0.00)
<i>Null: Unit root (assumes individual unit root process)</i>				
ADF - Fisher Chi-square	27.28 (0.04)	12.08 (0.44)	52.91 (0.00)	36.94 (0.01)
PP - Fisher Chi-square	20.97 (0.01)	7.22 (0.12)	15.10 (-0.06)	20.75 (0.11)

Notes: Exogenous variables: Individual effects; Automatic selection of maximum lags; Automatic lag length selection based on MHQC: 0; Newey-West automatic bandwidth selection and Quadratic Spectral kernel; Balanced observations for each test

Source: own processing

However, is the tests for the existence of a co-trending relation between business turnover and the proposed indicator of the companies' financial status is performed, it appears that there can be highlighted the existence of a co-trending vector in the case of sector "A" but of two such vectors in the case of sector "B". In other words, for sector "B" both variables are stationary and no co-integration / co-trending relationship can be considered.

**Table 6:** Tests of the null hypothesis that there are  $r$  co-trending vectors against the alternative that there are  $r-1$  co-trending vectors

**Sector "A"**

$r$	test statistic	10% critical region (conclusion)	5% critical region
1	0.13	>0.35 (accept)	>0.47 (accept)
2	0.56	>0.54 (reject)	>0.67 (accept)

**Conclusion (at 10%):  $r=1$**

**Sector "B"**

$r$	test statistic	10% critical region (conclusion)	5% critical region
1	0.04	>0.35 (accept)	>0.47 (accept)
2	0.39	>0.54 (accept)	>0.67 (accept)

**Conclusion (at 10%):  $r=2$**

Source: own processing

The existence of the co-trending vector between financial conditions and growth allows in the Bierens' methodology the decomposition of non-linear trend in growth. This can be done based on the fact that one can write  $F(x) = Q_2 Q_2' F(x)$ , where  $Q_2$  is the matrix of orthogonal eigenvectors of  $M_1$  corresponding to the positive eigenvalues. The vector  $Q_2' F(x)$  can be interpreted as the vector of common cumulative nonlinear trends.

Similarly,  $F'(x) = Q_2 Q_2' F'(x)$ , where  $Q_2$  is the matrix of orthogonal eigenvectors of  $M_2$  corresponding to the positive eigenvalues. The vector  $Q_2' F'(x)$  can be interpreted as the vector of common nonlinear trends.

Thus, for sector "A" we have:

Common cumulative nonlinear trend =

$$-0.151 \times \text{Component of } F(t/n) \text{ corresponding to FINANCIAL STATUS INDICATOR} \\ +0.98 \times \text{Component of } F(t/n) \text{ corresponding to BUSINESS TURNOVER}$$

Common nonlinear trend =

$$-0.06 \times \text{Component of } F'(t/n) \text{ corresponding to FINANCIAL STATUS INDICATOR} \\ +0.99 \times \text{Component of } F'(t/n) \text{ corresponding to BUSINESS TURNOVER}$$

Overall, these results shows that for sector "A" the proposed indicator of the companies' financial status form a non-linear relationship with the dynamic of business turnover whiles for sector "B" such relationship cannot be evidenced.

## Conclusions

This study is focused on the relations between the financial conditions characteristic for a set of Romanian quoted companies and the dynamic of their business turnover. The predictive capacity of some significant financial ratios for the companies' business turnover is analyzed and a methodology for the evaluation of their financial status based on these ratios is advanced. We found that the predictive capacity of some relevant financial ratios for the dynamic of some quoted companies' turnovers is non-uniform across the two conventional sectors in which we have grouped these companies. While for the companies with tertiary and quaternary activity the operating results-to- total assets ratio together with current -to -total assets and total equity-to-total liabilities ratios with appears to be relevant one in explaining the evolutions of their results, for the companies with primary and secondary activity only the fixed-to-total assets ratio and the structure of their financial resources displays statistical relevance. Based on these results, an synthetic indicator of the companies' financial status is constructed at the level of each individual sector and the non-linear correlation between this indicator and the business turnover is tested.

The study reveals some important inter-sectors differences in the nature, amplitude and relative importance of the involved transmission channels. Several explanations can be advanced for such differences.

Firstly, it can be argued that there is certain inter-sectors scale-differential effect with the companies from sector "B" usually displaying a larger scale and different organizational and functional structures comparing with the ones from sector "A". Such effect can leads to distinctive restrictions in the configuration of the companies' financial architecture and particular financing requirements.

Secondly, the companies from the two sectors display individual financial profiles with divergent own-to-borrowed financial resources ratios. Thus, the weighted costs of borrowed capital as well as the level and structure of this capital are influencing in particular manners the companies' results. Also, it can be presumed a non-uniform magnitude of the financial leverage effect between sectors.

Thirdly, the companies from the two sectors are operating in specific market environments with non-uniform efficiency of allocation and prices mechanisms and distinctive relationship between supply and demand. Fourthly, it is plausible to consider that due to imperfect information issues the decisions adopted by the managers from the two sectors are facing various moral hazard, adverse selection and residual loses issues which affects their companies' financial and economic performances.

This study does not explicitly address such explanations. Thus, further analyses are required for a better understanding of the involved transmission channels of the financial status' impact on companies' evolutions.

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#### DATA APPENDIX

Nr. crt.	Company	Market symbol	Field of activity	Codification of sector
1	ALRO S.A.	ALR	Heavy Industry	A
2	ALTUR S.A.	ALT	Heavy Industry	A
3	ALUMIL ROM INDUSTRY S.A.	ALU	Light Industry	B
4	AMONIL	AMO	Heavy Industry	A
5	ANTIBIOTICE S.A.	ATB	Light Industry	B
6	AZOMUREȘ SA	AZO	Heavy Industry	A
7	BERMAS S.A.	BRM	Light Industry	B
8	BOROMIR PROD S.A. BUZĂU	SPCU	Light Industry	B
9	CASA DE BUCOVINA-CLUB DE MUNTE	BCM	Light Industry	B
10	CEMACON SA ZALĂU	CEON	Heavy Industry	A
11	C.N.T.E.E. TRANSELECTRICA	TEL	Heavy Industry	A
12	COMELF S.A.	CMF	Heavy Industry	A
13	COMPANIA ENERGOPETROL S.A.	ENP	Heavy Industry	A
14	CONCEFA SA SIBIU	COFI	Heavy Industry	A

15	CONDMAG S.A.	COMI	Heavy Industry	A
16	DAFORA S.A.	DAFR	Heavy Industry	A
17	FARMACEUTICA REMEDIA SA DEVA	RMAH	Light Industry	B
18	IMPACT DEVELOPER & CONTRACTOR S.A.	IMP	Light Industry	B
19	OLTCHIM S.A. RM. VÂLCEA	OLT	Heavy Industry	A
20	OMV PETROM	SNP	Heavy Industry	A
21	PETROLEXPORTIMPORT S.A.	PEI	Light Industry	B
22	PREFAB SA BUCURESTI	PREH	Heavy Industry	A
23	PRODPLAST S.A.	PPL	Light Industry	B
24	ROMPETROL RAFINARE	RRC	Heavy Industry	A
25	ROMPETROL WELL SERVICES S.A.	PTR	Light Industry	B
26	SANTIERUL NAVAL ORSOVA S.A.	SNO	Heavy Industry	A
27	S.N.T.G.N. TRANSGAZ S.A.	TGN	Heavy Industry	A
28	SOCEP S.A.	SOCP	Light Industry	B
29	TERAPLAST S.A.	TRP	Light Industry	B
30	TITAN S.A.	MPN	Light Industry	B
31	SC TRANSILVANIA CONSTRUCȚII S.A.	COTR	Heavy Industry	A
32	T.M.K. – ARTROM S.A.	ART	Heavy Industry	A
33	TURBOMECANICA S.A.	TBM	Heavy Industry	A
34	TURISM FELIX S.A. BĂILE FELIX	TUFE	Light Industry	B
35	TURISM, HOTELURI, RESTAURANTE MAREA NEAGRA S.A.	EFO	Light Industry	B
36	ZENTIVA S.A.	SCD	Light Industry	B

***SUB-SECTION: ECONOMIC STATISTICS AND MODELLING***



## A MODEL TO MINIMIZE MULTICOLLINEARITY EFFECTS

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**Abstract.** *Multicollinearity implies near-linear dependence among regressors and is one of the diagnostics that harms enough the quality and the estimation of the regression models. Among the effects of multicollinearity can be mentioned that parameter estimates could lead to opposite signs or the variables turn out to having insignificant coefficients although it is known from theory or reality that the relationship exists. Also, when other variables are included or removed from the model this can affect the parameter estimates. Usually, multicollinearity is measured with the help of Variance Inflation Factor. A value greater than ten indicates severe multicollinearity in the model. Different approaches are known to reduce or eliminate multicollinearity effects but some of them are not always applicable due to data. The most used methods include addition of more data or elimination of the variable that is highly correlated with other independent variables or the use of the Ridge Regression. In addition to the well known and used models it is proposed here a new approach for the multicollinearity reduction. This method implies creating an index variable as a linear combination of the highly correlated ones. The index coefficients are selected under specific constraints imposed on the variables such that the new variable becomes highly correlated with the response variable but not with the independent ones. The best coefficients can be chosen out of the solution domain using an optimization program. In the new model, the highly correlated variables are replaced by the index one. The quality of the new model is improved by reducing or even eliminating the effects of multicollinearity. The regression model is expected to yield proper estimates. Also, VIF returns appropriate values, lower than ten. The method is exemplified on the BRD stock portfolio. Multicollinearity was eliminated, as showed by a value of one of the VIF and the model is expected to improve.*

**Keywords:** *multicollinearity, regression model, index variable*

**JEL classification:** *C20, C51, C58*

### **1. Introduction**

Reality has to be modeled using statistical tools by creating models that include those variables that can express it the most accurate. The question that arises is which variables should be included to benefit the most for the purposes of the analysis. What happens when these variables help in explaining the reality but they influence each other?

The purpose of this article is to propose a remedial measure method that fixes the problem of multicollinearity without excluding any explanatory variables from the model. The originality of the method is that it allows keeping in the model all the variables that are highly correlated as a new variable, which is a linear combination of them. This single index can be constructed when two or more predictor variables are highly correlated and are revealing properties of a common feature. In the new model, the multicollinearity will be reduced or even eliminated.

In practice it is difficult to find data that does not contain extreme observations and is perfectly related. Also, the included variables may help in reducing the remaining variation of the dependent one but they can create near-linear dependence among the regressors. These two approaches are not always easy to use. Other techniques used to reduce the effects of multicollinearity are Ridge Regression or Principal Component Analysis.

## **2.Literature review**

Multicollinearity and how to overcome the deficiencies of a model being affected by it has been widely discussed by the theoreticians. Different approaches were proposed over time, some of them being used and applied today. In practice, there are several used methods to fix its effects. Among these methods, can be mentioned data elimination or addition, Ridge Regression or techniques related to Principal Component Analysis. In most cases, economical practice imposes to keep all the variables in the model for a better transposition of the reality. In other cases, there is no more data to add in order to balance the sample lack of information.

A large discussion about multicollinearity detection and how to approach it depending on the point of view of an econometrician or a computer programmer is presented in Farrar & Glauber (1967).

A different approach from the generally used methods is proposed by Conklin & Lipovetsky (2003). This method assumes a change in the correlation matrix by creating a new matrix of the same structure. The negative and large in absolute value correlations are replaced in the new matrix by the opposite sign values. In such way, the only negative values will be the ones with small absolute values.

O'Brien (2007), suggest combining variables into a single index as a measure of multicollinearity reduction but it does not indicate how to estimate the coefficients of the linear combination.

Chen (2012) is taking care of the "implausible estimates" caused by the presence of multicollinearity in a modern approach. It is using external informations, given by the theory and reality, combined with the statistical confidence region. "Based on a priori knowledge" it can be chosen "the most reasonable set of coefficients inside the confidence region". These coefficients will be significant because "they are highly consistent with the data".

## **3.Multicollinearity**

Construction of regression models has been a well researched theme over time. The key for a well done study is a well done constructed model. Each step in the strategy of building a model should be carefully inspected. A sensitive issue is the model selection. According to Kutner et al. (2005), the selection of a regression model depends mostly on the diagnostic results and multicollinearity is one diagnostic that can harm enough the model.

Highly correlated predictor variables do not damage the prediction but they do have an impact on the parameter estimates of the regression models. Due to multicollinearity, variables can have statistically insignificant coefficients though there is a relation between the dependent and the set of independent ones. It can also lead to parameter estimates with opposite sign than expected from theory or reality. When predictor variables are added or removed there are important changes in the estimated parameters.

When predictor variables are highly correlated, the interpretation of the regression parameters is affected. The usual interpretation that an increase by one unit of a parameter when holding the others constant leads to a change of the expected value of the dependant variable does not apply in the presence of multicollinearity.

The widely used method in multicollinearity detection is the Variance Inflation Factor. A large value of VIF is used as an indicator of a severe multicollinearity. According to Kutner et al. (2005) a VIF value exceeding 10 suggest severe multicollinearity and the same is considered according to Hair et al. (1995), Mason et al. (1989), Freund et al. (2006). But the choice of a significant threshold has to be made regarding other factors that influence the stability of the estimates of the  $i^{\text{th}}$  regression coefficients and VIF values should not be fixed a priori to some specific values, according to O'Brien (2007) and Freund et al. (2006). Other authors suggest identifying a severe multicollinearity in the model using the orthogonality of the variables. According to Farrar and Glauber (1967), the model is affected by multicollinearity if the variables are not orthogonal.

To overcome the effects of multicollinearity, some of the measures that are taken are either to add more data or to eliminate the variable that creates dependence among the regressors. Often, the predictor variables cannot be excluded from the model because they highlight the essence of the real situations. Elimination of key explanatory variables can lead to biased estimators of the regression coefficients. Addition of more data is used to diminish the standard errors of the parameters but this is not always possible. Another technique used is the Ridge regression. It allows biased estimators of the regression coefficients but reduces the level of multicollinearity.

Considering the reasons why one should be careful when adding or eliminating explanatory variables, a method of multicollinearity reduction without variable elimination is introduced in this article.

#### 4. Model description and estimation

The following linear model is considered:

$$r_t = \alpha + \beta R_t + \varepsilon_t \quad (1)$$

where  $R_t$  and  $r_t$  are two stationary time series variables and  $\varepsilon_t$  is the error term. If the time series are not stationary, they have to be made stationary.

In most cases one variable is not enough to explain the variation of the dependant variable and more predictor variables should be included. If the predictor variables are highly correlated it leads to the appearance of multicollinearity in the model.

Considering that one predictor variable does not explain well the model (1), let introduce in the model two new stationary time series variables  $X_t$  and  $Y_t$ , characterized by:

$$\begin{aligned} cov(X_t, Y_t) &> 0 \\ cov(r_t, X_t) &> 0 \\ cov(r_t, Y_t) &> 0 \end{aligned}$$

The fact that the covariance between the new variables is positive implies collinearity in the model. This can affect the model by reducing the stability of the parameter

estimates or by inflating the standard errors. The covariances between the dependant variable and the two new variables are also greater than zero, which implies that the new variables influence the explained one. In the new created model,

$$r_t = \alpha + \beta R_t + \gamma X_t + \delta Y_t + \varepsilon_t \quad (2)$$

if  $\text{corr}(X_t, Y_t) \gg 0$  is relatively high is a first hint that the multicollinearity phenomena is present in the model and could bring damages to its quality. In such conditions, theory suggests that a very easy to work with method is to eliminate one of the highly correlated variables  $X_t$  or  $Y_t$  or add more data if possible.

The proposed method allows keeping all the variables that are significant in the model. In most cases the variables kept in the model are the ones that explain much of the variation of the response variable.

The question that arises is if there are plausible conditions under which a combination of the two explanatory variables could eliminate or reduce the collinearity in the regression model. It is important that independant variables to be correlated with the dependant variable but the independant ones not highly correlated among themselves.

The following linear combination of the two variables is considered:  $Z_t = aX_t + bY_t$ , where  $X_t$  and  $Y_t$  are stationary time series.

Now, are there any real values for the parameters a and b such that  $\text{cov}(R_t, Z_t)$  to be relatively small and  $r_t$  and  $Z_t$  to be highly correlated?

The assumption used is that the covariance among the regressors has to be lower than the minimum of the covariances among the pairs of the explanatory variable introduced in model (1) and each of the new introduced variables in model (2). These covariances have to be low. If covariances are negative values, in the below inequalities, their values will be considered in absolute values.

$$\text{cov}(R_t, Z_t) < \min\{\text{cov}(R_t, X_t), \text{cov}(R_t, Y_t)\}$$

Simple computations lead to:

$$\text{cov}(R_t, Z_t) = a\text{cov}(R_t, X_t) + b\text{cov}(R_t, Y_t)$$

The minimum of the covariances is denoted by m. The above inequality becomes:

$$a\text{cov}(R_t, X_t) + b\text{cov}(R_t, Y_t) - m < 0 \quad (3)$$

By solving inequality (3) it can be chosen from the solution domain those values for a and b such that  $\text{cov}(R_t, Z_t)$  to be small.

In order for  $Z_t$  to be a factor influencing the variation of the dependant variable  $r_t$ , in the model has to be kept those values of a and b such that the influence of the new variable on the dependant one to be high. This means that the following inequality must hold:

$$\text{cov}(r_t, Z_t) > \max\{\text{cov}(r_t, X_t), \text{cov}(r_t, Y_t)\}$$

The maximum of the two covariances is denoted by  $M$ .

The above inequality is a condition that allows to keep  $Z_t$  as a variable in the model. After straightforward computations, the above inequality becomes:

$$acov(r_t, X_t) + bcov(r_t, Y_t) - M > 0 \quad (4)$$

By solving (4) can be chosen those values for  $a$  and  $b$  such that  $cov(r_t, Z_t)$  to be high. Choosing the values for  $a$  and  $b$  is reduced to solving the system of linear inequalities (3) and (4) by classical methods. From the domain of solutions, any pair of solutions should reduce the effect of multicollinearity. So, solving the sistem of inequalities allows to keep those values for  $a$  and  $b$  that helps reduce the multicollinearity from the model by reducing the covariance between the predictor variables and increasing the covariance between the dependent and independent ones. With  $a$  and  $b$  known, the index variable can be computed.

Introducing  $Z_t$  in the model as the new variable it gives:

$$r_t = \beta_0 + \beta_1 R_t + \beta_2 Z_t + \varepsilon_t \quad (5)$$

Finally, we can return to the initial variables by multiplying them with the corresponding  $a$  and  $b$ :

$$r_t = \beta_0 + \beta_1 R_t + \beta_2 a_0 X_t + \beta_2 b_0 Y_t + \varepsilon_t \quad (6)$$

Model (6) is in fact a model that allows to keep all the needed explanatory variables without having highly correlated explanatory variables in the model. One model building process step, multicollinearity diagnostics is now exceeded.

## 5. Example

To exemplify the proposed method, it is considered the case of the stock market portfolio BRD over the period January- April 15<sup>th</sup> 2013, by creating a model of the number of daily transactions. In the mentioned period is a total of 63 observations. The stock portfolio BRD is traded on the Bucharest Stock Exchange, which has the main index BET. In the below model is verified if the index of the market has an influence on the number of daily closed transactions. It is expected that the market index to have an influence on the number of closed transactions. The estimated linear model in Stata is:

$$trans = 996.51 - 0.164BET \quad (7)$$

where:

- $trans$  represents the number of daily closed transactions
- $BET$  is the Bucharest Exchange Trading Index ( RON Index Points)

As expected, the index variable  $BET$  help in explaining the number of closed transactions, by explaining 6% of its variation. The low proportion can be due to the chosen period, which offers an economical and political environment that does not allow high performances on the Romanian stock market. When the index  $BET$  increses by one unit point, the number of closed transactions are expected to lower

with 0.16 transactions. The response variable variation can be better explained if more appropriate variables are included in the model. In practice, the number of closed transactions is influenced by several factors, among which can be mentioned: price of the portfolio, volume of the transactions, performance of the stock market, performance of the portfolio and many others.

Since the model is explained in a low proportion by only one variable, two new variables are introduced. These variables are considered here as volume of the transactions and the value of the closed transactions. These two variables are chosen this way because they are highly correlated and the proposed model can be better exemplified. Usually, the variables that create the multicollinearity phenomena in the model are highly correlated but not as high as the ones mentioned.

When the two new variables are included in the model, the simple linear model becomes:

$$trans = 861.64 - 0.14BET + 0.62vol + 0.186val \quad (8)$$

where:

- trans represents the number of daily closed transactions
- BET is the Bucharest Exchange Trading Index (RON Index Points)
- vol is the volume of trades (x1000)
- val is the value of the trades (x1000 RON)

All the model parameters are significant at a 10% level of significance and were estimated using Stata software. For the given data, the model with three independent variables explains better the variation of the number of closed transactions, which is 42% compared to 6% explained only by the stock index. The model is better explained using three and not only one explanatory variable.

**Table 1:** Correlation matrix

	trans	BET	vol	val
trans	1			
BET	-0.23	1		
vol	0.52	0.09	1	
val	0.51	0.10	0.99	1

It can be seen from the above table that the two new introduced variables are highly correlated among themselves, which suggest the presence of multicollinearity in the model. They are also medium correlated with the response variable, meaning that these two variables help in understanding the response one. Multicollinearity is confirmed by the VIF values, which exceeds by much the threshold values.

**Table 2:** VIF values

Variable	VIF
vol	1144
val	1146
BET	1

The proposed method indicates that the problem of multicollinearity can be fixed by replacing the highly correlated variables with a linear combination of them,  $Z = a *$

$vol + b * val$ . The coefficients of the linear combination are solutions of the imposed constraints system of inequalities:

$$\begin{cases} cov(BET, Z) < \min\{cov(BET, vol), cov(BET, val)\} \\ cov(trans, Z) > \max\{cov(trans, vol), cov(trans, val)\} \end{cases} \quad (9)$$

**Table 3:** Variance-Covariance matrix

	trans	BET	vol	val
trans	2904.25			
BET	-988.33	6041.15		
vol	22919.3	5621.93	671025	
val	20071	5509.73	599389	535908

The assumptions regarding the covariances are fulfilled:

$$\begin{aligned} cov(vol, val) &> 0 \\ cov(trans, vol) &> 0 \\ cov(trans, val) &> 0 \end{aligned}$$

Replacing the corresponding covariances in the sistem of inequations (9), it becomes:

$$\begin{cases} 5621.93a + 5509.73b < \min\{5621.93, 5509.73\} \\ 22919.3a + 20071b > \max\{22919.3, 20071\} \end{cases}$$

The solutions are obtained by solving the system of linear inequations. From the domain of solutions, were chosen  $a = 8$  and  $b = -8$  although any solution should work for the purpose of the analysis. The index variable becomes  $Z = 8vol - 8val$  and the new model is:

$$trans = 1006.55 - 0.17BET + 0.044Z \quad (10)$$

All the model parameters are significant at 5% level of significance.

In the regression model (10), multicollinearity was removed if looking at the VIF values from the below table.

**Table 4:** VIF values

Variable	VIF
Z	1
BET	1

As mentioned before, one of the effects of multicollinearity is that parameter estimates can have opposite signs. This was the case of  $val$  variable, which changed signs after multicollinearity was removed.

Although in this model the stock price is lower explained by the explanatory variables then in model (8), the problem of multicollinearity has been fixed. In this case, the

predictive variables help in explaining the number of closed transactions in a proportion of 40%, which increased from 6% when explained only by the stock index. Even though, in general, the method does not prove out an increase in the model quality, such results are expected.

## 6. Conclusions

The presented method is used to overcome the effects of the multicollinearity phenomena. The originality of this study consists of creating a new variable as a linear combination of the highly correlated ones. The linear combination coefficients are obtained by imposing specific constraints on the system of inequalities. The constraints under which the coefficients are computed are using strictly the covariances between the variables. Any pair of solutions from the solution domain will lower down the multicollinearity phenomena but the best pair can be chosen with the help of an optimization program. The best pair of solutions will lower down enough the correlation between the independent variables and increase the correlation between the independent variables and the response one. The multicollinearity will be lowered down and even fixed.

As further work, the method can be developed to apply to a set of several highly correlated variables and an optimization program that chooses the best set of coefficients will be of interest. Also, some work can be done in proving that the quality of the model increases when the highly correlated variables are replaced by the index variable.

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## WHAT INFLUENCES STUDENTS' EXPECTATIONS IN WHAT REGARDS GRADES?

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*Abstract: After a period of studying a certain subject, students form an opinion about it and begin having certain expectations. These expectations and the degree in which, in the end, they fulfil, contribute to the reputation of the university. Consequently, a continuous evaluation of the quality of the educational process is needed. The present research presents a part of a more complex study made on a sample of master students in Audit and Financial Management in Romania. The goal was to evidence the main factors that affect students' expectations in what regards the grades they will obtain at the end of the semester. For this, a questionnaire of 20 questions was applied to 250 such students. After factor reduction procedures were applied, six most significant variables were kept in the analysis: the proportion of knowledge acquired, the perceived level of utility of the discipline in the professional career of the student, the proportion in which the subject could contribute to getting employed in the field it belongs to, the evaluation method and two variables evaluating through grades the didactic performance during the course and the overall performance of the tenure professor. The influence of these variables upon the grade expected by the student was assessed with the help of the OLS regression, both in the simple and multiple forms. Out of the six hypotheses formulated, only one proved to be false based on the simple regression analysis. When individually assessed, the evaluation method announced by the teacher at the beginning of the semester turned out to have no statistically significant influence upon students' expectations. For the rest of the variables, results were according to the assumptions made, i.e. all determine in a significant positive manner the students' opinion about the grade they will get. We have also constructed the multiple regression models. When putting all variables together, the significance changes. The level of difficulty of the evaluation method becomes significant, while from the rest of the variables only the proportion of knowledge acquirement still holds. The final conclusion is as expected: the higher the proportion of acquirement, the higher the grade expected at the end of the semester, while the more difficult the evaluation method, the lower the grade.*

**Keywords:** *academic performance; master program; education; OLS regression; evaluation expectations, students' grades.*

**JEL classification:** *A23; C12; C21; C31; I21.*

## 1. Introduction

Students' expectations in what regards grades they will obtain at the end of the semester depend on a series of factors. In a complex analysis, they were asked to grade different aspects related to the teaching – learning process. The final goal was to evaluate the quality of the educational process and problems that may appear. Out of the results, the present study emphasizes the main factors that affect their expectations.

For an important educational progress it is necessary to know students' opinion on various aspects regarding the educational process. In literature we can find many studies on different factor influencing students' perceptions on education. Many researches were conducted on the importance of the education programs in finding a job after graduation (Phillips and Crain, 1996, Sellers and Fogarty, 2010). The way in which students prepare for the employment moment is reflected also in their implication in assimilating as much information and knowledge as possible during the years of study.

Cooper and Tom (1986) based on a study called Pygmalion in the Classroom (Rosenthal and Jacobson, 1968) demonstrated that the expectations teachers held for student performance influence student achievement. Others researchers conducted studies on the same relation between teachers and their students (Madon et al., 1998; Alvidres and Weinstein, 1999 etc), reflecting that the higher the teacher expectations were, the higher was the student achievement.

Later on, Periasamy et al (2012) conducted a study which reflected that the students' grades depend on their gender, financial status and study time. Other studies pointed out that without hard work students' performance cannot be achieved and their grades reflect that (Harb and El-Shaarawi, 2007).

Despite these internal factors, Jaggia and Hawek (1999) consider that the family background and the stability of a community are the main factors affecting students' performance.

As we can see there are many factors affecting the students' achievement of information and knowledge. Our study aims to develop a possible relation between some of these factors and the grades students expect to obtain, considering that the grades that students get reflect in a different proportion some of the factors described before.

The paper is structured as follows. In the first part, the Introduction, we present the reasons for this study and others researches identified in the scientific literature. The second one refers to the research hypotheses and the methodology we used to process the data we collected. Results are presented in section 3, followed by conclusions.

## 2. Research Hypotheses, Data and Methodology

In order to analyze the main factors that influence students' expectations, we have constructed a series of working hypotheses.

*H1: There is a direct relationship between the level of knowledge acquired by the students and the grade they expect to obtain.*

*H2: If the course is important for its future career, the student will learn and will get a higher grade.*

*H3: The higher the contribution of the course to finding a job in the field, the higher the interest of the student and, consequently, the grade expected.*

We expect students to be more interested in subjects that could increase their chances on the labour market, both from the point of view of finding a job and from the point of view of the type of job and level of salary.

*H4: There should be a negative relationship between the grade expected and the evaluation method announced.*

The tenure teacher was asked to inform the students at the beginning of the semester about the way they will be evaluated for the final grade. Obviously, we assume a low level of difficulty to be associated with high expectations of the students.

*H5: A positive relationship between the academic performance of the professor and the students' expectations for evaluation.*

Regardless of other factors, a bad academic performance may lead to a loss of interest of the students for that subject. Instead, the opposite should have as a final consequence a better performance of the student. Actually, this hypothesis was divided into two. Consequently, resulted hypotheses H5a and H5b. The first one evaluates the didactic performance during the course, bearing in mind that some of the classes were held by other persons than the tenure teacher. The latter assesses the overall performance of the tenure professor.

A complex questionnaire of 20 questions was applied on a sample of 250 students enrolled in the master courses in Auditing and Financial Management of the EU Funds. The master programme aims to develop a close relation between the higher education institutions and the entities from the practical environment that are already beneficiaries of programmes financed from the European Funds. Therefore, the master program management team decided that the involvement of the economic specialists experienced in the field of interest is very necessary. Therefore, the master classes and workshops for training will be held not only by the teachers, but also by the experienced practitioners in the master program field (Nistor et al, 2011).

After the validation process, the volume of the final sample was of 236 students. Factor reduction procedures (Buiga, 2000; Buiga, 2011) were applied and 6 exogenous variables were finally left in the analysis. The variables are:

- GRADE (endogenous variable) – the grade students expect to obtain at the end of the semester for the course under discussion. The minimum value is 1 and the maximum is 10.
- PROP\_KNOWLEDGE (exogenous variable) – the proportion of knowledge students consider they have acquired for the discipline under discussion.
- CAREER\_UTILITY (exogenous variable) – the perceived degree of the discipline's direct utility in the professional career of the students.
- EMPLOYMENT (exogenous variable) – the extent to which the knowledge assimilated during the course will contribute to finding a job in the field of the programme students are enrolled in.
- EVALUATION\_METHOD (exogenous variable) – the perceived level of difficulty of the evaluation method announced by the tenure teacher at the beginning of the semester.
- DIDACT\_ACT\_PERF (exogenous variable) – the grade given by each student for the performance of the didactic activity during the courses.

- OVERALL\_PERF (exogenous variable) – the grade given by each student for the overall performance of the tenure professor.

The first four exogenous variables were initially measured in proportions from 0% to 100%. For analysis purposes, they were transformed on a scale from 1 to 10, just as the endogenous variable.

In the case of the teaching performance two variables were considered. The reason is that all tenure teachers invited practitioners during the semester for practical lectures. Consequently, we have evaluated, on one side, the didactic activity as a whole, for all the persons that made presentations for a discipline, and, on the other side, only the overall performance of the tenure teacher.

In order to test the hypotheses made, we have employed the correlation coefficient and the OLS regression method, in the simple or multiple form (Dragos, 2008), with constant term. The endogenous variable was, in all cases, the grade each student has declared to expect at the end of the semester. The regression models were validated through the common regression diagnosis procedures based on residual values.

### 3. Results

The goal of the present study is to assess the factors that influence students' expectations in what regards grades they will obtain at the end of the semester. To do this, first we have asked the students in the sample to give the grade they anticipate to get. The average value for the sample is 8.95 (see table 1). Results show that students are very optimistic. On a scale from 1 (lowest) to 10 (highest), most of them declared the value 9. Moreover, no grade lower than 6 was encountered and more than 25% of the students are expecting to be graded with the highest value – 10.

**Table 1:** Descriptive statistics for the grades students expect to get at the end of the semester.

		What is the grade you expect to obtain for the course?
N	Valid	227
	Missing	9
Mean		8.95
Median		9.00
Mode		9.00
Std. Deviation		0.96
Minimum		6.00
Maximum		10.00
Percentiles	25	8.00
	50	9.00
	75	10.00

Source: own calculations using SPSS 17.0.

To test the hypotheses we have run simple linear OLS regressions. The results are synthesized in table 2. We can conclude that the highest dependence is between the grade expected and the level of knowledge acquired by the student.

The first hypothesis tested the existence of a direct relationship between the level of knowledge acquired by the students and the grade they expect to obtain. The positive coefficient of 0.372 accepts this hypothesis at a 99% confidence level. Actually, all the hypotheses that were accepted by the analysis had a significance level of 0.000, so a confidence level of 99%. Consequently, only the sign of the coefficient remained to be inspected.

**Table 2:** Regression analysis: the grade expected versus factor – synthesis.

Hypothesis	Factor var.	Coef.	Sig.	Beta C.	Adj. R <sup>2</sup>
H1	PROP_KNOWLEDGE	0.372	0.000	0.627	0.391
H2	CAREER_UTILITY	0.208	0.000	0.397	0.154
H3	EMPLOYMENT	0.193	0.000	0.370	0.133
H4	EVALUATION_METHOD	- 0.035	0.236	-0.080	0.002
H5a	DIDACT_ACT_PERF	0.350	0.000	0.393	0.150
H5b	OVERALL_PERF	0.290	0.000	0.290	0.080

Source: own calculations using SPSS 17.0.

In the regression model between the grade expected and the proportion in which the course is important for a future career, the coefficient is 0.208. Thus, we can state that the hypothesis made is true, the higher the importance of the course for a future career, the higher the grade.

In other studies (Mare et al., 2012, Span et al., 2012) we have seen that students are more interested in courses with a direct utility on the market. So, their main goal is getting employed in a certain field. That is why we expected a direct relationship to be found between the grade and the contribution of the knowledge taught during a specific course to finding a job in the field of interest. The positive coefficient sustains this assumption. However, when comparing the results for hypotheses 2 and 3, we can see that the importance of the course in a future career has a higher influence than the direct utility of getting employed in a certain field. H2 and H3 were constructed from the idea that students will try to learn as good as possible for a course that has practical utility. And the most important aspect is the contribution on the labour market. Consequently, the direct relationship should be first between this contribution and the level of knowledge acquired. Only afterwards, the grade expected and, finally obtained. That is why we have also tested the level of correlation between the above mentioned variables.

Both correlation coefficients have values between 0.3 and 0.7, showing a medium intensity relationship. Moreover, this relation is positive, as expected. Again, the second variable has a lower coefficient, meaning a lower influence (thing already evidenced by the above mentioned results) (see table 3).

**Table 3:** Correlation coefficients between the level of knowledge acquired and the contribution of the course for a future career.

	Value	Approx. Sig.
What is the proportion in which you consider the course has a direct utility for your future career?	0.510	0.000
The knowledge acquired during this course will contribute to finding a job in the field of study in a proportion of...	0.473	0.000

Source: own calculations using SPSS 17.0.

The fourth assumption is related to the evaluation method. The coefficient has the right sign (negative) – the more difficult the evaluation method, the lower the grade expected to be obtained. But the significance value is much higher than 0.05 (0.236). We can conclude that there is no significant relationship between the grade expected and the evaluation method announced by the professor.

Our last assumption is related to the performance of the professor. A good academic and didactic performance should be accompanied by higher expectations from the students. To test H5 we have used two variables. In H5a the students were asked to grade the performance of the didactic activity during the courses. In the H5b case, the grade was given for the overall performance of the professor. In both cases the hypotheses made were accepted – the coefficients are positive and statistically significant. However, the performance seen strictly from the point of view of the course has a higher influence on students' expectations in what regards their final examination results. An increase in the grade for the didactic activity with 1 unit would lead to an increase in the grade expected by 0.35 points, while the same increase of the evaluation vote for the overall performance has as a consequence an expected higher grade by 0.29 points. An explanation of this could be the fact that for the entire sample, the tenure professor invited specialist to the courses that explained the applicability of the notions taught.

Up to this point, individual influences were assessed. We were curious to see what happens when all these factors are analyzed together – do they all remain significant and if changes occur in the degree of influence. The multiple regression analysis shows that almost all the factors considered become statistically insignificant (see Table 4). Consequently, we have re-estimated the regression with the two significant factors.

**Table 4:** Multiple regression model – coefficients and significance tests.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	5.848	0.563		10.396	0.000
PROP_KNOWLEDGE	0.349	0.046	0.588	7.538	0.000
CAREER_UTILITY	0.021	0.047	0.041	0.448	0.654
EMPLOYMENT	-0.017	0.046	-0.032	-0.359	0.720
DIDACT_ACT_PERF	0.070	0.068	0.077	1.036	0.301
EVALUATION_METHOD	-0.050	0.024	-0.115	-2.083	0.039
OVERALL_PERF	-0.004	0.068	-0.004	-0.060	0.952

Source: own calculations using SPSS 17.0.

Finally, the best model for explaining students' expectations in relation with their final evaluation is based on two factors – the proportion of acquirments for each subject and the level of difficulty of the evaluation method announced by the professor. This is the model with the best fit –  $R^2 = 0.407$  and adjusted  $R^2 = 0.401$ . This means that the two predictors explain 40% of the variance of the endogenous variable. Additionally, the ANOVA analysis returned a value of 75.4 for the Fischer test, at a significance value = 0.000. Table 5 presents the coefficients and the significance tests for the model. Moreover, the signs of the coefficient are the ones expected – positive for the share of knowledge acquired and negative for the difficulty of the evaluation method.

**Table 5:** Best fitted regression model – with two factors.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.330	0.298		21.231	0.000
PROP_KNOWLEDGE	0.375	0.031	0.635	12.184	0.000
EVALUATION_METHOD	-0.056	0.023	-0.128	-2.458	0.015

Source: own calculations using SPSS 17.0.

#### 4. Conclusions

The goal of the present research was to assess the factors that influence students' expectations in relation to the grades they will obtain at the final exams. After a complex judgment, based on statistical methods, six main factors remained in the analysis. Their individual evaluation confirmed the hypotheses in 5 out of the 6 cases considered. We demonstrated that the grade expected by a student to be obtained at the end of the semester is positively influenced by the degree in which the discipline was assimilated and it could influence the personal career in general

and the employment in that specific domain, in particular. A relationship of the same kind was also found with the performance of the didactic activity, through both the proxies used. Even though the sign of the coefficient returned as expected, the influence of the degree of difficulty of the evaluation method announced by the professor did not prove to be statistically significant. However, the low  $R^2$  values show there other more important factors influencing the grade students expect for the final evaluation.

Things changed when multiple regression analyses were made. The most significant model consists in two exogenous variables – the proportion of knowledge assimilated and the difficulty of the evaluation method. The signs of the coefficients were as presumed – positive in the first case and negative in the second. All other exogenous variables turned to be insignificant.

In conclusion, the higher the proportion of knowledge accumulation, the higher the grade. In the same time, the less difficult evaluation, the higher the grade expected.

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# ENVIRONMENTAL PROTECTION IN ROMANIA THROUGH EUROPEAN STRUCTURAL FUNDS – A SPATIAL ECONOMETRICS APPROACH

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**Abstract:** European Structural Funds have been created with the clear goal to redistribute money among European Union members in such a way as to help poorer regions diminish the gaps between them and the richer ones. The present study assesses this problem for the Structural Operational Programme Environment in Romania. Using spatial econometrics methods, we evaluate two issues on the sample of 42 Romanian counties. The first one is if any clusterization process takes place in what regards contracting funds through ESF for environmental protection projects. The second one is intended to test whether the main principle of the ESF is satisfied – helping the poor in a sustainable development process. Using the quartile maps and the spatial Moran's I autocorrelation coefficient we show different results for the clusterization topic. When considering the budget value of the projects implemented through SOP ENV, both as total and as eligible share, Romanian counties group based on a positive global spatial autocorrelation. This means that counties with approximately the same budget levels are neighbours. Transylvanian counties have gained the most out of the projects on environment. When the number of contracts is assessed, the distribution of the counties proves to be random and no global spatial autocorrelation was found. Moreover, the map analysis shows that, in general, there is a negative relationship between the value of the budget and the number of contracts. The spatial regression analysis shows the violation of the ESF principle. The coefficients of the GDP are positive. This implies a direct relationship between the richness of the county and the projects implemented through the SOP ENV. Thus, instead of being used by the poorer regions, money goes to the richer ones. The higher the GDP, the higher the value of the budget for the environmental protection programmes financed through European funds. The GDP also positively influences the number of contracts scheduled or signed, but the only at a 10% significance level.

**Keywords:** SOP ENV; sustainable development; environment; Romanian counties; spatial distribution; spatial regression model.

**JEL classification:** C31; Q56.

## 1. Introduction

The present paper combines two of the main issues of interest nowadays – European Structural Funds and the environment. For a young member state as Romania, financial aid in the form of the Structural Funds is the main entrance channel for investments. It helps the receiving country modernize its infrastructure

and improve the skills of the labour force in order to diminish the gap between it and the older members. But the efficiency of such programmes depends on the capacity of the receiving country to absorb these funds.

Environmental protection is the subject of continuous concern internationally. Economic activity and the lifestyle have affected environment in a great manner. Problems such as pollution, global warming, etc are now intensively discussed worldwide and solutions are sought. Companies are required to improve their production plants to become more environmental friendly. In the same time, governments search for methods to reduce pollution. Dragos and Dragos (2013) consider the environmental quality of a country as a specific factor for this field, accomplished through adequate governmental politics and population self-awareness.

Considering all these, we have decided to combine the two issues by assessing the projects on environment financed in Romania through the European Structural Funds.

The goal of the ESF is to help poorer members of the European Union reduce discrepancies that exist between them and the richer ones. However, practice has shown that it is not always true. There are many cases in which such projects were implemented by the latter group as they also had the financial resources necessary for the contribution of the beneficiary. Is it also the case of the environmental protection programmes in Romania? In order to reach a pertinent conclusion we have employed spatial econometrics methods to evaluate the budgets and the number of contracts of the projects implemented in the Sectoral Operational Programme ENVIRONMENT. The spatial distribution based on counties was assessed through different kinds of maps fated to emphasize whether any clusters appear or there is a random distribution of values in the sample. Afterwards relationships between variables were studied through different spatial econometric methods, including spatial autocorrelation and spatial regression.

Sectoral Operational Programme Environment (SOP ENV) is one of the seven operational programmes under the "Convergence" objective of the European Union for the period 2007-2013.

SOP is the most important financing program for municipal environmental infrastructure and continuous investment in the pre-accession programs (Phare, ISPA and SAPARD). SOP is based on the objectives and priorities of EU environmental policies, reflecting Romania's international obligations and national specific interests.

The overall objective of the SOP ENV is to improve the living standards and environmental standards and at the same time to contribute to the achievement of the European accession commitments and environmental regulation compliance. To achieve this overall objective, the SOP ENV finances investments for the following sectors:

- The water/wastewater sector – is allocated 60% from EU SOP funds to this sector;
- Waste management sector/rehabilitation of historically polluted lands - investments in the sector aim to create integrated waste management systems at regional level, in parallel with the closure of non-compliant landfills;
- The heating sector – the funds allocated for the sector aim to reduce the

- emissions from municipal heating plants;
- The nature protection sector – the objective is to ensure an adequate management of the protected areas and to prevent the degradation of biodiversity and natural resources;
- Flood protection and coastal erosion reduction aim to protect people and goods from the devastating effects of flooding;
- Technical Assistance. Activities financed from the technical assistance are intended to increase the absorption capacity of EU funds by financing the project preparation and monitoring activities, evaluation and control of projects, publicity and information actions regarding the SOP Env.

The program is financed by two funds:

- European Regional Development Fund (ERDF) –for the waste sectors, nature protection and technical assistance;
- Cohesion Fund (CF) - for the water, heat and flood protection sectors.

The SOP ENV is created to reduce the gap between the EU and Romania regarding environmental infrastructure both in terms of quantity and quality. This should be reflected in effective public services, taking into account the principle of sustainable development and the principle of "polluter pays".

Analyzing the objectives above, we can mention that what follows the SOP ENV program is the development and maintenance of sustainable development, the economic sustainability of the beneficiary countries and the social empowerment of all the people.

Sustainable development is perhaps the key element of the humanity in the XXI century (Ienciu, 2009). Sustainable development became a very important element once with the advent of Brundtland Report in 1987 and with the awareness of the greenhouse effect. The most widely accepted definition of sustainable development is the one proposed in this report. Brundtland Report defined sustainable development as meeting the current needs without compromising the ability of future generations to meet their own needs (WCED, 1987).

Sustainable development does not concern only with the environmental issues. The reference document of the World Summit on Sustainable Development in 2002 (WSSD, 2002) speaks of the independence and mutual support pillars of sustainable development as economic development, social development and environmental protection.

Closely related to sustainable development is the concept of sustainability. Sustainability is a concept that refers to a fair allocation of resources on a global scale. Equity or fairness comes from a responsible and rational distribution of resources and opportunities between the present and future generations (O'Dwyer and Owen, 2005; Dragomir, 2008: 2).

So far, sustainability can be seen as the ultimate objective that an entity/country wishes to attain, a status or a desired condition, while sustainable development is the process by which the human activity is moving towards sustainability and maintains this status (Hibbitt, 2001).

Social responsibility is interpreted as the social dimension of the sustainable development concept. In this case, the entity encompasses social responsibility, economic responsibility and environmental responsibility (Zwetsloot, 2003, Desjardins, 1998).

SOP ENV program is an important step in achieving these objectives so necessary

for the economic growth and social development during the globally crisis we face with.

Our analysis is thus based on two main ideas:

- Is there any spatial clustering process in respect to contracting environmental protection projects through ESF?
- Is the main principle of the ESF respected in reality in the case of the Environment Sectoral Operational Programme, i.e. more funds for the poorer counties to help diminish the gap between them and the richer ones?

The paper is structured as follows. In the first part, the Introduction, we present the reasons for this study, emphasizing the importance of the main concepts included in the general objectives of the SOP ENV program. The second one is the methodological part, where the spatial econometrics methods used and the data are explained. Results are presented in section 3, followed by conclusions.

## 2. Methodology and Data

To evaluate the performance of Romania in attracting structural funds through the Environment SOP programmes considering the two basic ideas, we have employed Spatial Econometrics methods. The easiest way to analyze spatial distributions is through maps. They emphasize the existence of clustering processes. For the present analysis were used the quartile maps, that divide the sample into 4 equal groups based on the values of the variables. Deriving from the map distribution, were constructed the rest of the analyses. But before that, the spatial weights matrix was constructed. In this case, the most suitable proved to be queen contiguity matrix (it had the lowest Moran value). The Moran's I statistic (Moran, 1950) was employed to test the existence of global spatial autocorrelation. If clustering processes exist, than spatial autocorrelation should be found, too. It can be of two types: positive, when similar values concentrate in a certain area, and negative, when regions with dissimilar values are neighbours. The Moran's I statistic is computed based on the following formula:

$$I_t = \frac{z_t' W z_t}{z_t' z_t}$$

where  $z$  is the observation vector in year  $t$  seen as deviation from the average and  $W$  is the standardized weights matrix (Upton and Fingleton, 1985). The null hypothesis is the absence of spatial autocorrelation. Moreover, positive/ negative spatial autocorrelation exist when the value of  $I_t$  is larger/ smaller than  $E(I) = -1/(n-1)$ . The stability of the spatial autocorrelation was tested with the randomization procedure with 999 permutations. The result is a histogram with the  $I_t$  value as a yellow bar and a pseudo-significance level.

The relationship between the projects financed through SOP ENV and the level of richness of each county was dealt with using spatial regression. The first step is to estimate a classical OLS model and then establish whether it is the most suitable one or it has to be re-specified in the form of a spatial lag model or a spatial error model. For this are used the Lagrange Multipliers. In the study were constructed four models in which each of the variables related to the projects (TOT\_VAL, ELIG\_VAL, CONTRACTS, CONTR\_SIG) were endogenous and the county's GDP was de exogenous variable. In the case of the first two models, that assessed the relationship between the GDP and the budget value, the most suitable proved to be

the spatial autoregressive model (spatial lag). It is characterized by the addition of a spatially lagged variable that transforms it into a non linear model. Its general form is (Anselin, 1999):

$$y = \rho W y + X \beta + \varepsilon$$

The third and the fourth model, assessing the impact of the GDP upon the number of contracts are simple OLS models.

They were all tested for significance and validity using the spatial econometrics procedures.

The sample is made up of the 42 counties of Romania. They were evaluated from the point of view of the following aspects:

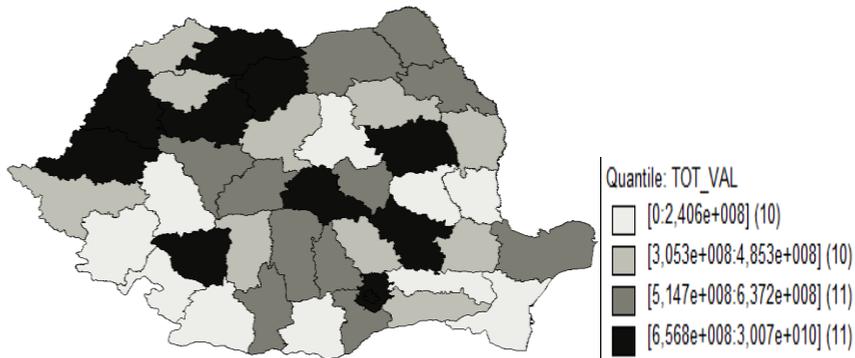
- The total budget value of the projects financed through the Environment SOP for each county (TOT\_VAL);
- The total eligible budget value for the same kind of projects (ELIG\_VAL);
- The number of contracts in general (CONTRACTS) and the number of signed contracts (CONTR\_SIG) for the environmental protection programmes per county;
- The county GDP – as there were no significant changes in the value of the NUTS 3 GDP during the period of implementation of the SOP ENV financed programmes, we have employed the average annual value for entire period.

Data was collected from the site of the Romanian National Institute of Statistics and the national authorities for the management of the European Structural Funds, for the SOP ENVIRONMENT.

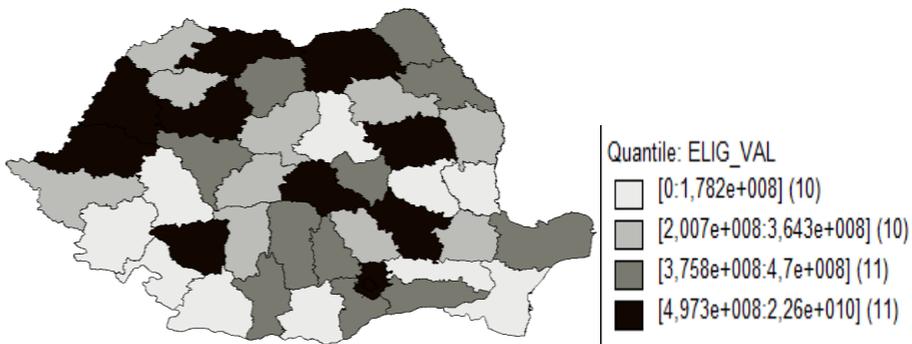
### 3. Results

The first objective of our study was to reveal if any clustering process takes place in Romania, at NUTS 3 level, in respect to programmes financed through the Environment SOP for a sustainable environmental protection. The first step was to construct the maps. Where the maps showed possible existence of spatial autocorrelation, the latter was assessed with the help of the spatial autocorrelation tests.

Figure 1 shows the total budget value of all projects financed through SOP ENV in a county, while figure 2 is constructed for the total eligible budget value per county from the point of view of the environment protection programme. In both cases, using the quantile distribution, we can see that, except for Bucharest and the Ilfov County, most of the upper values are concentrated in the North-West part of Romania, in Transylvania. A closer analysis shows there are 4 upper outliers: Bucharest, Ilfov, Bacau and Maramures, regardless of the type of budget considered.

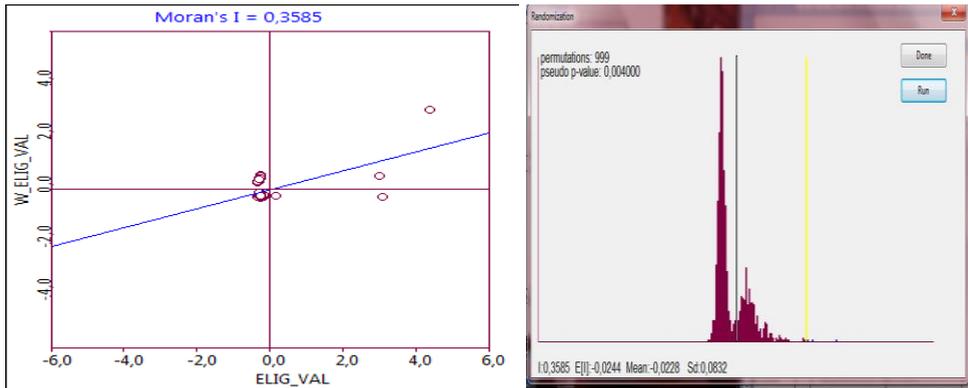


**Figure 1:** Spatial distribution based on quantiles of the Romanian counties based on the total budget value financed through SOP ENV.  
Source: own calculations using OpenGeoDa 1.0.



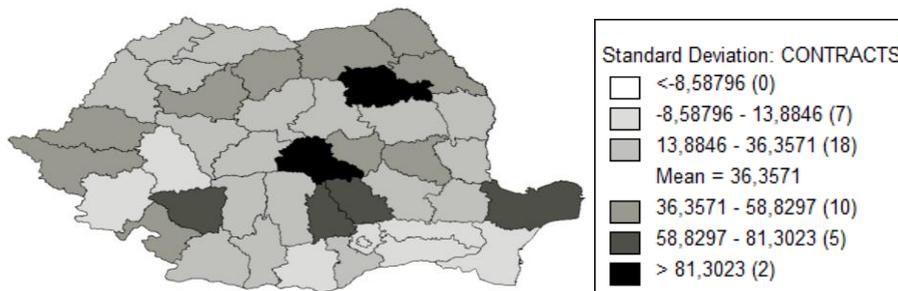
**Figure 2:** Spatial distribution based on quantiles of the Romanian counties based on the total eligible budget value from the point of view of the SOP ENV.  
Source: own calculations using OpenGeoDa 1.0.

Other clustering processes are also evidenced on the two maps. Consequently, we have tested the statistical existence of spatial autocorrelation, using the Moran I statistic and scatter plot. For the total budget, the Moran's  $I = 0.357$ , showing a positive spatial autocorrelation. This implies that counties that gained more projects on environment protection are neighbours. In the same time, counties with lower values bound on counties with approximately the same values attracted. The same type, positive spatial autocorrelation, was also to be found for the eligible value per county, with almost the same coefficient value – Moran's  $I = 0.358$ . In both cases, the statistical significance was evaluated using the randomization procedures. As an example for the analysis, figure 3 presents the Moran scatter plot with the randomization procedure for the eligible budget. Using 999 permutations, the randomization procedures shows the stability of the autocorrelation - the standard, yellow line is on the right side of the plot while the pseudo p-value =  $0.004 < 0.05$ , rejecting the null of no autocorrelation.



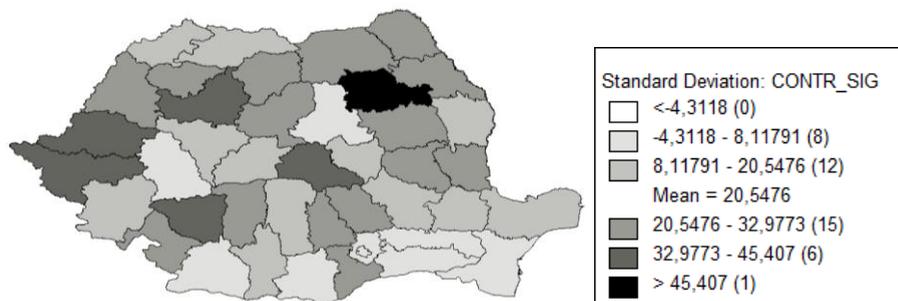
**Figure 3:** The total eligible budget value - univariate Moran's I - scatter plot and randomization procedure.

Source: own calculations using OpenGeoDa 1.0.



**Figure 4:** Standard deviation map based on the total number of contracts.

Source: own calculations using OpenGeoDa 1.0.

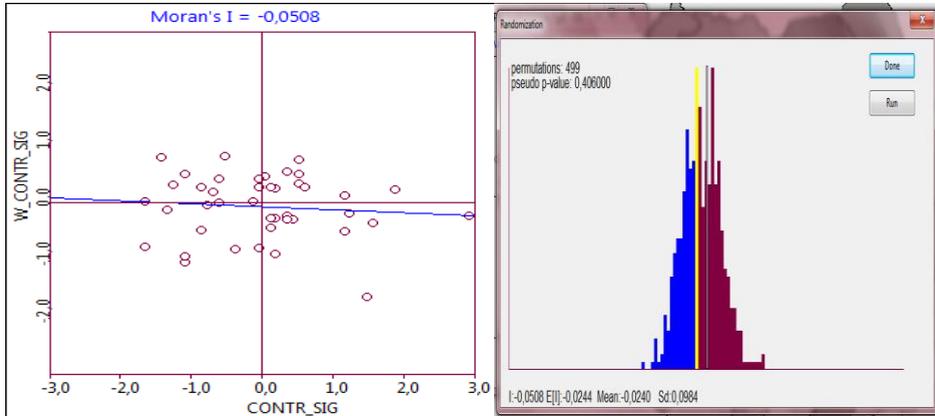


**Figure 5:** Standard deviation map based on the number of contracts signed.

Source: own calculations using OpenGeoDa 1.0.

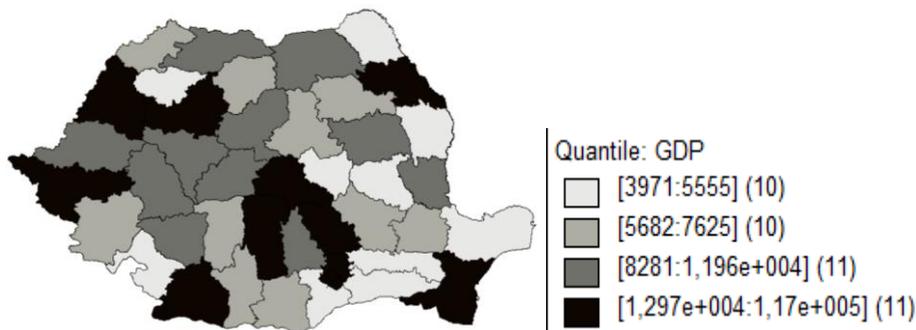
Things change considerably, when assessing the number of contracts scheduled and the number of contracts actually signed. An average of 36.36 contracts per county were scheduled, out of which the average number of contracts signed was 20.55. Figures 4 and 5 show that the distribution changes, counties with high budget values having lower number of contracts. This implies that in these regions, the level of the budget per contract was much higher. This result is presented in the form of standard deviation maps. There is only one upper outlier evidenced by the box plot

– the Neamt county with 57 contracts signed. No evidence of spatial autocorrelation was found, for neither of the variables involving the number of contracts. For example, for the number of contracts signed, a coefficient of -0.05 was obtained, with a pseudo p-value = 0.41.



**Figure 6:** The number of contracts signed - univariate Moran's I - scatter plot and randomization procedure.  
Source: own calculations using OpenGeoDa 1.0.

In the second part of our analysis we wanted to see if the fundamentally principle of the European Structural funds stands on or not. To assess this aspect we also introduced in the analysis the GDP/county. The quartile map shows a random distribution (see figure 7). In the same time, the Moran's I test validated this assumption with a value of =0.0166 (almost inexistent) and a pseudo p-value = 0.17.



**Figure 7:** Quartile distribution of the Romanian counties based on the average GDP value in the period under analysis.  
Source: own calculations using Open GeoDa 1.0.

When comparing figure 7 with figures 1 and 2, we can see that there are richer counties that benefitted from high amount of money through the SOP ENV. Consequently, we expect to obtain a direct relationship between the two, instead of a negative one. The best way to evaluate this aspect is the regression method. We have considered as endogenous variable both types of budgets evaluated – the

total one and the eligible part from the SOP ENV point of view. The positive sign of the GDP's coefficients in both cases (see table 1) validates the assumption made based on map analysis. We can thus conclude that the main principle of the ESF is not satisfied in this case, as on average, the higher the GDP, the higher the value of the projects financed through the SOP ENV. Obviously, the same results in what regards the number of contracts. The coefficients of the regression models are presented in table 1. We also present the best fitted model for each case. The Moran test found the existence of spatial autocorrelation for the two variables related to the budget and none for the number of contracts. Consequently, we expected spatial autoregressive or error models in the first two cases and the simple OLS model for the last two. The results confirm our expectations.

**Table 1:** Spatial regression analysis – GDP as exogenous variable.

Endogenous variable	Coefficient	Std. error	z-value/ t-statistic	Prob.	Type of best fitted model
TOT_VAL	216350	40681.94	5.318	0.000	Spatial lag
ELIG_VAL	161664.8	30212.4	5.351	0.000	Spatial lag
CONTRACTS	0.00039	0.0002	1.974	0.055	Simple OLS
CONTR_SIG	0.0002	0.0001	1.842	0.072	Simple OLS

Source: own calculations using GeoDa 1.0.

#### 4. Conclusions

We have based our study on two issues.

The first one, the clustering process, was to be found in the case of the values of the budgets for the projects implemented through the SOP ENV. Counties group based on the amount of money gained for environmental protection through ESF. Results have shown a positive spatial autocorrelation, with the highest amount in Bucharest, Ilfov, Neamt and Maramures. As a group, Transylvanian counties have attracted most of the money.

In respect to the number of contracts, things change. The distribution reverses, in the sense that counties with high budgets have low contract numbers. This means that in these counties, the value/contract is high in comparison with the others. Could this be an efficiency indicator? We intend to assess this in a future study. Moreover, the distribution of counties based on contracts is random, no significant spatial autocorrelation being found.

In the case of the second issue analyzed, we can conclude that the principle of the ESF is not respected in this case. The positive value of the coefficient of the GDP in the regression model shows that an increase in the GDP would lead to an increase in the amount of money obtained through the SOP ENV. Thus, instead of being used by poorer counties, the programme is much more used by the richer ones. An explanation could be the fact that the beneficiary has to support part of the expenses and, obviously, a poor region cannot afford to do that.

## Acknowledgement

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# HUMAN CAPITAL: CAUSE AND EFFECT OF THE ECONOMIC GROWTH. AN EMPIRICAL ANALYSIS

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**Abstract** *From the birth of the human capital theory, economists were interested to find evidences showing the impact of the human capital on the economic output, discussing and debating more or less the effect of economic growth on the accumulation of human capital in the economy and the association between education and health.*

*The paper aims to test several econometric models to explain the relationship between human capital and economic output. Using World Bank data, 17 countries with the fastest economic growth rate during 1960-2010 were selected. Four econometric models are tested to explain the accumulation of human capital as input and as effect of economic output. Correlation coefficients were calculated to highlight the association between education and life expectancy.*

*The paper demonstrates that human capital, in his two components (education and health), in countries with a fast growth rate, are positively and strongly related to the economic output, in both senses, human capital being input and output of the economic growth. On the one hand, the economic growth adds to the resources available in the economy for improvements in health and education and, on the other hand, human capital is influencing significantly the economic output. Education and health are interrelated, being positively and strongly associated.*

**Keywords:** *human capital, education, health, economic growth*

**JEL Classification:** J 24, I 25, I15, O40

## 1. Introduction

The relationship between human capital and the economic output is intensively investigated in the literature of human capital. Several cross-country evidences supports the idea that human capital development is an important element in explaining variations in growth rates and level of per capita income.

Educational and health capital are the two main components of the human capital (Neagu, 2010). There are several studies analyzing the effects of the education and life expectancy on the economic growth. But there is less studied the explanation of human capital (health and education) evolution as a dependent variable on the economic output.

The aim of the paper is to explore the relationship between human capital and economic growth, in its both senses, by testing how the two components of human capital: educational and health capital are associated with the economic output (as cause and as effect of economic growth).

The paper is organized as follows: after a short literature review in section 2, the theoretical approach and the methodology of the study is described in section 3. In the section 4 are presented the main findings of the study and the section 5 contains the final conclusions and further research.

## **2. Human capital and growth: a short literature review**

The studies of Paul Romer (1990) regarding the effects of the human capital investment on economic growth concluded that the human capital stock determines the rate of economic growth, meaning that an economy with a higher human capital stock will evolve faster. The model of economic growth developed by Romer explains the fast economic growth of the developed countries in the 20th century, emphasizing that the low levels of human capital explain why are unobservable the progress of the underdeveloped countries, as they could benefit from their integration in the world economic network. He concluded that the rate of return in education can explain the rate of economic growth, through cross country regressions.

Robert Lucas (1988) developed growth models with human capital accumulation and specialized human capital accumulation, through activities like learning by doing and in the job training.

Nancy Birdsall, Thomas Pinckney and Richard Sabot studied the economic growth and education in countries with abundant resources and concluded that these countries expend less for education, in average, than other countries. The explanation resides in the "virtuous growth circle", in which education, as investment in human capital, has direct and indirect effects on the economic output. In rich countries the yearly increase by 1,4% of the enrollment rate in primary and secondary education has lead, in 25 years, to a difference of 40% in GDP per capita. Hanushek and Kimko (2000) concluded that the results to mathematic and science in 31 countries are positively and strong related to the growth of the macroeconomic output. Hanushek and Woessman (2009) conceived a methodology for estimating the human capital quality and its effect on macroeconomic output.

The international organizations and several economists are suggesting that the investment in education have to be a priority of the governments in the developing countries (Becker, 1994 Hanushek, 1995, UNDP, World Bank).

Barro and Lee constructed data sets, several times (2000, 2010), on educational attainment in the world, to investigate how output relates to the stocks of human capital measured by average years of schooling and as well as by the composition of educational attainment of workers at various education levels. They found a significantly positive effect of schooling on output.

In the OECD countries, several studies highlighted the positive impact of the human capital on the GDP per capita growth. The absolute value of the differences between the human capital stocks in rich and poor countries is the right factor determining the convergence of the poor countries towards the rich countries (Cohen and Soto, 2001).

Several studies explored the relationship between the accumulation of human capital and the economic output. Schultz (1961, 1962a, 1962b, 1963, 2003), Barro (1991), Bils and Klenow (2000), Mankiw et al(1992) identified a significant contribution of human capital (measured by the schooling rate) at the GDP growth. Barro and Sala-i-Martin (1995) found that the average schooling years have a significant positive impact on the economic output. Mamuneas, Stavides and Stengos (2002) concluded that the sensitivity of the human capital to the economic output is differentiate between countries, is positive for developed countries and for developing and underdeveloped is lower or zero.

Factors accumulation, inclusively, human capital accumulation, can explain the income differences across countries. In a panel regression of 83 countries, Soto (2009) found the coefficient of schooling as highly significant.

The literature of human capital is less focused on health and its impact on the economic output. There some studies carried out by Grossman (1972, 1999), Schultz (1962), and Gary Becker (2007) which are considering health as a form of human capital. Bloom, Canning and Sevilla (2001) found that a good health has a positive, sizeable and statistical significant effect on aggregate output. In 2004, Bloom, Canning and Sevilla argued that life expectancy effect in growth regressions appears to be a labour productivity effect.

Several studies, using WHO Data, concluded that health is an important determinant of income (i.e. Weil, 2005). But there are a number of indirect channels through which health affects a country are output. Several of these indirect channels, such as the effect of better health in encouraging the accumulation of human and physical capital, could have positive impact on income that are as large as the direct channel.

### 3. Theoretical approach and methodology

The assumptions of the study are: (i) the economic output positively influences the accumulation of human capital in the economy, (ii) the human capital has a positive impact on the economic output (iii) as two expressions of human capital, education and life expectancy, are strongly interrelated.

From the World Bank statistics I extracted time series for the period of 1960-2010 of the following data regarding world countries: GDP per capita, growth rate, life expectancy, enrolment rate in secondary education. Then, I selected countries that fulfil simultaneously the following criteria: (i) the level of economic growth rate (above the average world level (4,2%) for 1960-2010), (ii) data availability for all years (growth rate, GDP per capita, life expectancy, enrolment rate in secondary education), (iii) a standard deviation of the growth rate between 1960-2010 under the value of 7,5. The final number of selected countries was 17.

For each of the 17 countries, I used four regression equations. First, I assumed that life expectancy as a proxy of health capital is dependent on economic growth and the dependence is quadratic. This assumption is inspired by the findings of Hicks (1987). Second, I used the same assumption for the rate of enrolment in secondary education as a proxy of educational capital. Third, I assumed that the economic output, measured by GDP per capita, is a quadratic function of education, using the findings of the same author. Fourth, I assumed that economic output is dependent on education and life expectancy.

For the  $i$  country, the estimated 'life expectancy'  $LE_i$  can be obtained through the equation:

$$LE_i = a_i + b_i y_i + c_i y_i^2 \quad (1)$$

where:  $a_i$  is a constant parameter for the  $i$  country;  $b_i$ ,  $c_i$  are the regression coefficients and  $y_i$  is GDP per capita for the  $i$  country.

For the  $i$  country, the estimated 'rate of enrolment in secondary education',  $ER_i$  can be obtained through the equation:

$$ER_i = d_i + e_i y_i + f_i y_i^2 \quad (2)$$

where:  $d_i$  is a constant parameter for the  $i$  country and  $e_i, f_i$  are the regression coefficients and  $y_i$  is GDP per capita for the  $i$  country.

Then a regression equation was used to verify how the effect of education is reflected in the economic output:

$$y_i = m_i + n_i ER + o_i ER^2 \quad (3)$$

where:  $m_i$  is a constant parameter,  $n_i, o_i$  are regression coefficients and  $y_i$  is GDP per capita for the  $i$  country.

Finally, we can estimate the effect of both forms of human capital (education and life expectancy) through the equation:

$$y_i = k_i + h_i ER_i + g_i LE_i \quad (4)$$

where:  $k_i$  is a constant parameter for the  $i$  country,  $h_i, g_i$  are regression coefficients,  $y_i$  is GDP per capita for the  $i$  country,  $ER_i$  is enrolment rate in secondary education and  $LE_i$  is life expectancy.

There were calculated, for the selected countries, the coefficients of partial correlation between growth rate, GDP per capita, on one hand, and enrollment in secondary education rate and life expectancy on the other hand and finally, the correlation between the two types of human capital (education and life expectancy).

## 4. Results and discussion

### 4.1. Life expectancy and economic output

In all countries included in the survey, except Botswana, the quadratic model of life expectancy as function of GDP per capita (equation 1) is statistically validated (Table 1), for a significance threshold of 95%. In a graphic representation, the function is a flattened  $\cap$ -curve, meaning that life expectancy has limited growth when GDP per capita increases and after the maximum point, the economic growth cannot produce positive effects on the life expectancy. The evolution of the indicator 'Life expectancy' is explained in proportion of 40-97% by the evolution of GDP per capita, in selected countries, if all other factors are constant. Furthermore, life expectancy is positively associated with the evolution of GDP per capita, except Botswana and Lesotho (Table 2).

### 4.2. Education and economic output

In most of the selected countries (16 of 17), the correlation between education (expressed by the rate of secondary enrollment) and GDP per capita is strong and positive (0,8-0,94). In India the association of the two variables is moderate (0,4). The increase of the enrollment rate in secondary education, in selected countries, during 1960-2010, could be explained by the dynamic of the income per capita, in proportion of 45-94%, if other factors are constant. The graphic representation of the function is a flattened  $\cap$ -curve. The model of quadratic function (equation 2) is statistically totally validated in 12 countries of 17 and in other 5 could not be validated for all coefficients, for a significance threshold of 95%. Therefore, this model has to be treated with precaution in further studies.

In reverse, I tested if the evolution of GDP per capita is significantly influenced by education. In the table 2, we can see that in a quadratic model (equation 3), the coefficients of multiple correlation show a strong association between ER (enrollment rate) and  $y$  (GDP per capita) and  $y^2$ . But the model is statistically totally validated only in 5 countries and, in other 11, cannot be validated for all coefficients of the regression equation.

#### **4.3. The effect of human capital accumulation in the economic output**

The fourth model (equation 4) tests the effect of human capital (expressed by life expectancy and enrollment rate in secondary education) in the dynamics of GDP per capita. In all countries, the increase of GDP per capita could be explained in proportion of 69-94% by the increase of life expectancy and of enrollment rate, if other factors are constant, the multiple correlation being very strong. For 7 of 11 countries the model is totally validated and for 10, the model is only overall validated (not for all variables), for a significance threshold of 95%.

#### **4.4. Life expectancy and education**

As we can see in Table 2, for the selected countries, these variables are strongly and positively associated, except for Botswana and Lesotho, where life expectancy is negatively correlated with economic output.

As two components of human capital, life expectancy and education are interrelated and supportive for each other. A healthy and long life is an incentive for more education and more educated people are preserving their health status and have a longer life.

### **5. Conclusions and further research**

In fast-growing countries, economic growth, expressed by GDP per capita, positively influences life expectancy and enrollment rates in secondary education. On the other hand, the assumption that human capital determines economic growth is verified. Both expressions of human capital, the enrollment rate in secondary education and the life expectancy, have a positive impact on GDP per capita. Education and life expectancy are positively and strongly associated in most countries.

For a significance threshold of 95%, a quadratic dependence of life expectancy on GDP per capita is validated for all regression variables. The rest of the models are overall validated, the validation for all variables being under discussion.

Based on these findings, other research can be conducted, for groups of developing and developed countries, by testing log models of aggregate income. Further researches are needed as well, to explore all the channels of economic growth through which accumulation of human capital can be stimulated in economy.

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## TABLES

**Table 1:** Regression statistics results (1)

Country	Botswana	Brazil	China	Colombia	Costa Rica	Dominican Republic
Eq.(1)LE (Life expectancy)						
Multiple R	0,27	0,95	0,63	0,96	0,95	0,94
R squared	0,07	0,92	0,4	0,92	0,93	0,89
No. observations	49	49	49	49	49	49
Coefficients						
Intercept	53,53	55,6	60,05	58,01	63,08	54,51
GDP	0,056	0,005	0,01	0,0067	0,0067	0,01
GDP squared	-0,01	-3,7E-07	-3,5E-06	-6,98E-07	-6,98E-07	-1,4E-06
Model validation	not valid	totally valid	totally valid	totally valid	totally valid	totally valid
Eq.(2)ER (Enrollment rate in secondary education)						
Multiple R	0,97	0,67	0,87	0,97	0,95	0,84
R squared	0,94	0,45	0,76	0,94	0,91	0,71
No. observations	40	40	40	40	40	40
Coefficients						
Intercept	2,08	26,65	41,35	20,45	29,78	25,51
GDP	0,02	0,01	0,02	0,025	0,06	0,01
GDP squared	-1,7E-06	-1E-07	-3,7E-06	-2,22E-06	5,5E-07	-8,1E-07
Model validation	overall valid	overall valid	totally valid	totally valid	totally valid	overall valid
Eq.(3) y (GDP per capita) (explained by ER )						
Multiple R	0,94	0,66	0,95	0,96	0,95	0,89
R square	0,89	0,44	0,92	0,93	0,90	0,79
No. observations	40	40	40	40	40	40

Coefficients						
Intercept	47,88	-3689,35	7331,06	1367,05	-2998,01	1623,06
ER	30,57	160,32	-304,87	-54,89	126,87	-65,88
ER squared	0,44	-0,75	3,19	1,01	-0,28	1,31
Model validation	overall valid	overall valid	totally valid	totally valid	overall valid	overall valid
Eq.(4)y (GDP per capita) (explained by LE and ER)						
Multiple R						
R squared	0,94	0,85	0,85	0,94	0,97	0,87
No. observations	0,88	0,72	0,83	0,88	0,94	0,77
Coefficients:	39	39	39	39	39	39
Intercept						
ER	27,04	-26092,21	-9624,94	7397,78	-12931,8	9669
LE	69,8	453,2	119,68	-158,59	166,17	151,09
Model validation	-9,44	-12,9	38,56	92,11	61,40	28,42
	overall valid	overall valid	totally valid	overall valid	totally valid	totally valid

Source: author's calculations based on equations (1)-(4) by using Excel Data Analysis Tool

**Table 1: Regression statistics results (2)**

Country	Egypt	Hong Kong	India	Indonesia	Israel	Korea
(1)LE (Life expectancy)						
Multiple R	0,98	0,96	0,96	0,94	0,97	0,94
R squared	0,97	0,92	0,92	0,89	0,95	0,88
No. observations	49	49	49	43	49	49
Coefficients						
Intercept	44,23	70,33	42,28	50,44	69,8	60,32
GDP	0,02	0,0007	0,05	0,02	0,0008	0,002
GDP squared	-7,6E-06	-1,4E-08	-3,5E-05	-6,2E-06	-1,51E-08	-6,2E-08
Model validation	totally valid	totally valid	totally valid	totally valid	totally valid	totally valid
(2)ER (Enrollment rate in secondary education)						
Multiple R	0,96	0,90	0,85	0,88	0,93	0,86
R squared	0,93	0,82	0,73	0,78	0,87	0,75
No. observations	40	40	40	41	34	38
Coefficients						
Intercept	16,9	43,66	12,42	14,12	67,95	58,91
GDP	0,07	0,0033	0,09	0,049	0,003	0,0702
GDP squared	-1,9E-05	-7,2E-08	-6,2E-05	-1E-05	-9,46E-08	-2,7E-07
Model validation	totally valid	totally valid	totally valid	totally valid	totally valid	totally valid
Eq.(3) y (GDP per capita) (explained by ER )						
Multiple R	0,87	0,92	0,44	0,91	0,89	0,75
R square	0,75	0,86	0,19	0,83	0,90	0,56
No. observations	40	40	40	41	34	38
Coefficients						
Intercept	500,96	57383,02	-867,54	935,16	221099	20312
ER	-19,43	-2383,63	56,72	-49,78	-583,686	-725,239
ER squared	0,38	24,64	-0,55	0,94	39,10	6,38
Model validation	overall valid	totally valid	overall valid	totally valid	overall valid	overall valid
Eq.(4)y (GDP per capita) (explained by LE and ER)						
Multiple R						
R squared	0,93	0,97	0,92	0,83	0,96	0,96
No. observations	0,86	0,94	0,85	0,69	0,92	0,93
Coefficients:	39	39	39	40	34	38
Intercept						
ER	500,96	-270556	-420,97	-2736	-176679,2	-84629
LE	-19,43	3926,03	91,64	48,10	2524,31	1434,38
Model validation	0,38	-282,75	-18,8	12,52	-108,73	-116,79
	totally valid	totally valid	totally valid	overall valid	overall valid	overall valid

Source: author's calculations based on equations (1)-(4) by using Excel Data Analysis Tool

**Table 1: Regression statistics results (3)**

Country	Lesotho	Malaysia	Pakistan	Thailand	Turkey
(1)LE (Life expectancy)					
Multiple R	0,64	0,96	0,96	0,95	0,96
R squared	0,42	0,93	0,93	0,90	0,93
No. observations	49	49	49	49	49
Coefficients					
Intercept	46,46	61,62	46,03	57,67	46,7
GDP	0,04	0,003	0,05	0,01	0,07
GDP squared	-6,3E-05	-3,3E-07	-3,4E-05	-2,4E-06	-5,5E-06
Model validation	totally valid	totally valid	totally valid	totally valid	totally valid
(2)ER (Enrollment rate in secondary education)					
Multiple R	0,94	0,83	0,92	0,90	0,93
R squared	0,89	0,70	0,84	0,81	0,86
No. observations	41	41	40	40	40
Coefficients					
Intercept	4,26	34,76	10,21	13,87	11,9
GDP	0,071	0,01	0,03	0,02	0,019
GDPsqd	-3,1E-05	-7,6E-07	-1,1E-05	-1,5E-06	-1,2E-06
Model validation	totally valid	totally valid	overall valid	overall valid	totally valid
Eq.(3) y (GDP per capita) (explained by ER )					
Multiple R	0,95	0,84	0,95	0,89	0,84
R squared	0,91	0,71	0,91	0,80	0,71
No. observations	41	41	40	40	40
Coefficients					
Intercept	104,78	-407,3	874,79	-556,59	-931,4
ER	-2,06	-50,77	-75,65	48,92	49,2
ER squared	0,43	1,94	2,31	0,045	0,49
Model validation	overall valid	overall valid	totally valid	overall valid	overall valid
Eq.(4)y (GDP per capita) (explained by LE and ER)					
Multiple R					
R squared	0,92	0,92	0,92	0,91	0,85
No. observations	0,86	0,85	0,84	0,84	0,73
Coefficients:	40	41	40	39	39
Intercept					
ER	63,04	-54501,2	-1519	-5225,58	-54792,33
LE	-3,04	888,87	23,88	75,12	79,98
Model validation	18,2	-78,37	21,89	37,47	74,08
	overall valid	overall valid	totally valid	overall valid	overall valid

Source: author's calculations based on equations (1)-(4) by using Excel Data Analysis Tool

**Table 2: Partial correlation coefficients**

Country	Correlation coefficient between GDP per capita and life expectancy	Correlation coefficient between GDP per capita and enrolment rate in secondary education	Correlation coefficient between life expectancy and enrolment rate in secondary education
Botswana	-0,27	0,94	-0,6
Brazil	0,87	0,64	0,82
China	0,49	0,80	0,63
Colombia	0,85	0,92	0,91
Costa Rica	0,87	0,95	0,75
Dominican Republic	0,85	0,84	0,85
Egypt	0,88	0,84	0,98
Hong Kong	0,93	0,83	0,92
India	0,81	0,41	0,83
Indonesia	0,83	0,82	0,97
Israel	0,95	0,86	0,91
Korea	0,89	0,69	0,83
Lesotho	-0,09	0,92	-0,30

Country	Correlation coefficient between GDP per capita and life expectancy	Correlation coefficient between GDP per capita and enrolment rate in secondary education	Correlation coefficient between life expectancy and enrolment rate in secondary education
Malaysia	0,89	0,83	0,96
Pakistan	0,85	0,91	0,89
Thailand	0,83	0,89	0,74
Turkey	0,85	0,84	0,95

Source: author's calculations, based on World Bank Data

# STABILITY, BIFURCATIONS AND CHAOS IN UNEMPLOYMENT NON-LINEAR DYNAMICS

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**Abstract:** *The traditional analysis of unemployment in relation to real output dynamics is based on some empirical evidences deducted from Okun's studies. In particular the so called Okun's Law is expressed in a linear mathematical formulation, which cannot explain the fluctuation of the variables involved. This paper deals with an introductory study about the role of non-linearity in the investigation of unemployment dynamics. The main idea is the existence of a non-linear relation between the unemployment rate and the gap of GDP growth rate from its trend. The macroeconomic motivation of this idea moves from the consideration of two concatenate effects caused by a variation of the unemployment rate on the real output growth rate. These two effects are concatenate because there is a first effect that generates a secondary one on the same variable. When the unemployment rate changes, the first effect is the variation in the level of production in consequence of the variation in the level of such an important factor as labour force; the secondary effect is a consecutive variation in the level of production caused by the variation in the aggregate demand in consequence of the change of the individual disposal income originated by the previous variation of production itself. In this paper the analysis of unemployment dynamics is carried out by the use of the logistic map and the conditions for the existence of bifurcations (cycles) are determined. The study also allows to find the range of variability of some characteristic parameters that might be avoided for not having an absolute unpredictability of unemployment dynamics (deterministic chaos).*

**Keywords:** *Unemployment; Economic growth; Logistic map.*

**JEL classification:** *E24;C02.*

## 1. Introduction

The phase of the economic cycle has strong implications on the employment levels of a Country through different channels. Business decisions on investment and employment depend on several socio-economic variables. The aggregate demand influences the level of utilization of the productive factors, and this in the long term also means investment decisions and capital accumulation. The capital incorporates technology, affects the productivity of workers and contributes to the formation of the human capital. Furthermore the transfer of labour force from a declining sector to another may be a thrust which affects its size and its allocation.

Structural changes in the economic environment can cause profound changes in employment that may prevent from returning to levels recorded before a downturn.

In this case the potential public support, in addition to its being a guide for the general upturn, can move towards the retraining of workers or the facilitation of their transition from a declining industry to a rising one.

Among the instruments to analyze these complex relationships, there is the quantitative relation between the unemployment rate and the *GDP* gap studied by the economist Arthur Melvin Okun (1962) for the U.S. economy in the 60s.

The so-called *Okun's Law* originated from the observation of some regularity in the dynamics of specific economic variables. It was conceived by the economist Okun in 1962, and represents an instrument to compare the current output and the potential *GDP*, starting from the difference between the gap of current unemployment rate and its natural level.

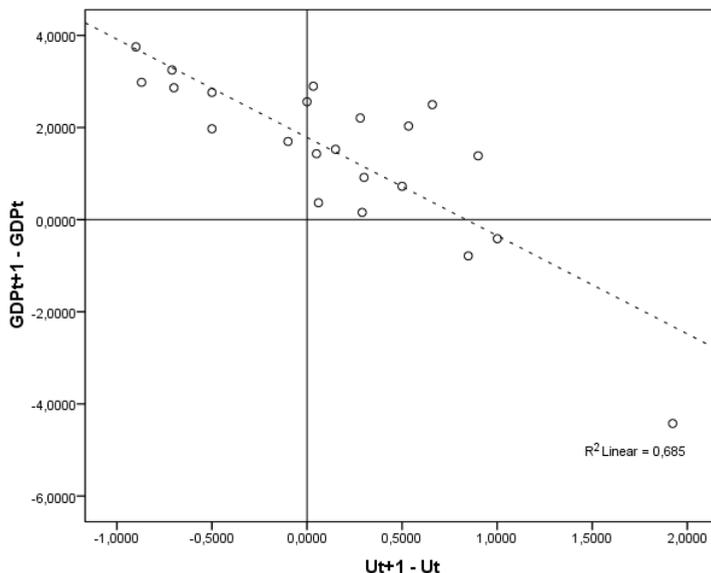
The output gap, that is the difference between the current *GDP* and the potential one, may be positive or negative. In the first case the aggregate demand is greater than the aggregate supply, and this situation tends to increase inflation. In the negative case the economic system operates at a lower level than the optimal one. Okun observed an empirical evidence of the U.S. data, considering how the higher level of current unemployment respect to the natural one, could be considered a cause of an increasing gap between the current level of *GDP* and the potential one (trend). The *Okun coefficient* has been estimated several times in economic studies adopting the different reformulations of the original relationship (see, among many contributions, Smith, 1975; Gordon, 1984; Knoester, 1986; Kaufman, 1988; Prachowny, 1993 and Weber, 1995). Initially it was verified that an increasing of unemployment rate by 1%, originates a drop of 2-3% of the real *GDP* from its potential value. The economic explanation for this empirical regularity is due to the fact that, during periods in which there is expansion of output, more workers are employed or work hours are extended.

The *Okun's Law* can therefore be seen as an instrument of economic policy to control the unemployment level and the trend of *GDP*. Of course, the employment level depends on characteristics of the national system and the local labour market and then the value for other Countries may be different from the final effect in the United States. The aim of bringing unemployment close to the natural level could be reached by a support to the aggregate demand, also by public aids that could sustain the output level. With the increasing of output level, it becomes necessary to increase the number of the labour force in the system. Obviously the number of newly employed workers must be greater than the natural variation of population, because over time, thanks to knowledge and new technologies, the productivity of labour increases, implying the decrease of the number of workers necessary for an unchanged level of output.

Economic studies (see Silvapulle et al., 2004) have highlighted an asymmetry in the relation of Okun. The positive turns in the economic cycle are less influential on unemployment respect the negative ones. This condition should be valid in all the Countries like the U.S. that have a labour market with few restrictions that implies the possibility of a rapid decrease of the labour force.

Most recent determinations of the coefficient of Okun have confirmed the trend found in the 60s from empirical regularities, at least for U.S. and Canada, while the relationship is weaker in Europe and Japan (see, for an analysis on G7 Countries, Moosa, 1997). In many European Countries labour regulation and the role of trade unions prevent firms from adapting the number of workers promptly to the needs dictated by the economic cycle.

The following chart shows the relationship between one-period (annual) changes in *GDP* and in the unemployment rate in the *Euro Area* (17).



**Figure 1:** Relationship between one-period (annual) changes in *GDP* rate and in the unemployment rate for the *Euro Area* (17), 1992-2013\* (\*estimates)  
Source: Our elaborations on *IMF* data

Even by the comparison between the annual variations of the two variables is clear the inverse relationship. This evidence is confirmed over time, though with obvious distinctions, and it is more evident in the largest economic contexts such as the *U.S.*, the *E.U.*, the *Euro Area* and the *G7* group, nonetheless remaining valid even in the single national contexts (see, among others, Mattoscio and Odoardi, 2012).

## 2. Unemployment non-linear dynamics and real output growth

The dynamic model that funds the analysis contained in this paper moves from a generalized version of *Okun's Law* that links the behaviour of real output growth and changes in unemployment over time. In this generalized form *Okun's Law* states that the unemployment rate  $u$  declines by  $\gamma$  percentage point for every 1 percentage point of annual real output growth  $g$  above trend. But the same law establishes that, if output growth were 1 percent below trend, unemployment would rise  $\gamma$  percentage point.

A mathematical form of this version of *Okun's Law* can be expressed in the following way (Dornbush and Fisher, 1985, p. 483):

$$u_{t+1} = u_t - \gamma (g_{t+1} - g_{t+1}^e) \quad (1)$$

where  $u_t$  is the unemployment rate at time  $t$ ,  $g_{t+1}$  and  $g_{t+1}^e$  respectively are the growth rate of real output at time  $t+1$  and the expected one (trend);  $\gamma$  is a real positive

number (parameter).

The *Okun's Law* is an empirical relation between growth and unemployment, but its generalized form can be integrated by a theoretic hypothesis about the non-linearity of the relation itself.

In fact it has much significance to hypothesize the dependence of real output growth gap ( $g_{t+1} - g_{t+1}^e$ ) on unemployment of the previous period as a quadratic function, in consequence of the presence of two interconnected effects on real output growth dynamics coming from a change in unemployment rate. We think to the double effect (direct and indirect) of a variation in unemployment rate on the real output growth: a direct effect, linked to technological aspects, is the variation in the level of production in consequence of the variation in the level of the labour factor; an indirect effect is the change in the level of production in consequence of the variation in the aggregate demand due to the different individual disposal income caused by the previous variation of production itself.

The analytical form of this type of quadratic relation can be written in the following way, according to the double effect described above and considering the algebraic signs of the coefficients  $\alpha$  and  $\beta$  not predetermined:

$$g_{t+1} - g_{t+1}^e = -\alpha u_t - \beta u_t^2 \quad (2)$$

(the negative signs in the second member of this equation are opportune for the following calculations).

By the simultaneous consideration of equalities (1) and (2) it is possible to obtain the following dynamic equation of the time path of the unemployment rate:

$$u_{t+1} = (1 + \alpha \gamma) u_t + \beta \gamma u_t^2 \quad (3)$$

If we use an opportune linear transformation of variable  $u_t$  in (3), we can write an equation equivalent to (3) itself, that acquires the analytical form of the logistic map (May, 1976).

The transformation is:

$$u_t = -[(1 + \alpha \gamma) / (\beta \gamma)] U_t \quad (4)$$

The logistic map so obtained is:

$$U_{t+1} = (1 + \alpha \gamma) U_t (1 - U_t); \quad (5)$$

$(1 + \alpha \gamma)$  is the characteristic parameter of the map itself and equation (5) is the time path equation of the supporting variable  $U_t$ .

### 3. Steady states, stability analysis and conditions to avoid chaos

The discussion of the possible time paths of the variable  $U_t$  and consequently of the variable  $u_t$  that expresses the unemployment rate, with respect to the variation of the characteristic parameter  $(1 + \alpha \gamma)$  leads to the conditions of the existence of bifurcations and periodic cycles and therefore to those related to the onset of deterministic chaos.

These latter in particular are important because they allow to know how to "avoid

the chaos” that is inherent in the dynamics of the system. This result is consistent with a very true statement: chaos must be “known” in order to “be avoided”, since it is a phenomenon more close to everybody than one might think.

The first important considerations are to be referred to the conditions of existence of a stable steady state: the convergence of the unemployment rate to a stable steady state is conditioned by the variability of the parameter  $(1 + \alpha \gamma)$  in the open set of real numbers  $(1,3)$ , according to the stability analysis that is usually made in relation to the logistic map. On the other hand, for the existence of a stable steady state, the same condition, interpreted as the double inequality  $1 < (1 + \alpha \gamma) < 3$ , leads to impose that the parameter  $\gamma$  should vary in the open set of real number  $(0, 2/\alpha)$ , that is:  $0 < \gamma < (2/\alpha)$ . For the coherence of the algebraic signs in this inequalities,  $\alpha$  would be positive, since  $\gamma$  is a positive parameter. The sign of  $\beta$  would be either positive or negative.

Analyzing the equation (3), that is the time path of the variable  $u_t$ , there are two values of the unemployment rate that could be interpreted as steady states:  $u^*_1 = 0$  and  $u^*_2 = -\alpha/\beta$ , both of them determined by imposing  $u_{t+1} = u_t$  in (3) itself. The two potential steady states so determined coincide with the values in which the gap  $(g_{t+1} - g_{t+1}^e)$  would be equal to zero, in consequence of the relation expressed by equation (2).

But  $u^*_1 = 0$  (corresponding to  $U^*_1 = 0$ ) must not be considered, being the equation (3) an identity in this value. We observe the coherence of this mathematical result with the economic significance: the steady state corresponding to an unemployment rate equal to zero is a trivial result.

Moreover  $u^*_2 = -\alpha/\beta$ , corresponding to  $U^*_2 = [(\alpha \gamma) / (1 + \alpha \gamma)]$ , is the only steady state to be considered; it exists and is stable if  $0 < \gamma < (2/\alpha)$ , according to the general results of the stability analysis of the logistic map.

Our analysis becomes more useful in relation to the aim of avoiding chaos that is the aim of avoiding the absolute unpredictability of unemployment dynamics. We summarize the main results by referring to three different ranges of values of the characteristic parameter  $\gamma$  of the logistic map. Another useful result of our study is the possibility of evicting cycles in unemployment rate dynamics.

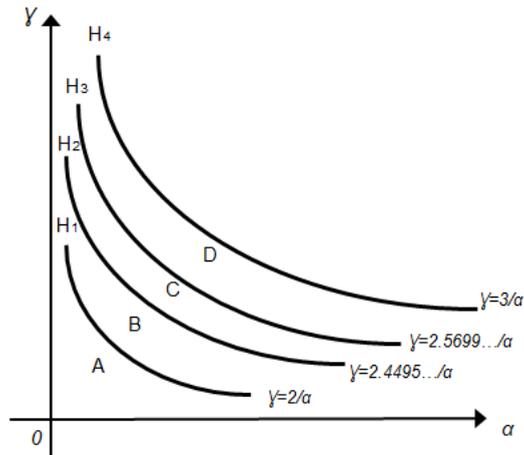
When  $(2/\alpha) \leq \gamma < (2.4495.../\alpha)$  the time path of the variable  $U_t$ , and consequently of the unemployment rate  $u_t$ , undergoes a first bifurcation (2-frequency cycle).

When  $(2.4495.../\alpha) \leq \gamma < (2.5699.../\alpha)$  bifurcations of the time path of the variable  $U_t$ , and consequently of the variable expressing the unemployment rate  $u_t$ , successively double themselves ( $2^n$ -frequency cycles).

Finally, when  $(2.5699.../\alpha) \leq \gamma \leq (3/\alpha)$ , the time path of the variable  $U_t$ , and consequently of the variable expressing the unemployment rate  $u_t$ , evolves with the presence of cycles characterized by “infinite frequency”, that is with the presence of the absolute uniqueness of any value of the rate itself, whose evolution “appears” stochastic, but it is only absolutely disordered, in other words the deterministic chaos occurs. The last closed set of real numbers should be “avoided”, and consequently it should be avoided that the parameter  $\gamma$  of the generalized form of Okun’s Law (1) varies in the interval of real numbers:  $[(2.5699.../\alpha), (3/\alpha)]$ .

#### 4. Graphical representations

The discussion about the numerical consequences of the variability of the parameter  $\gamma$  can be visualized by a simple graphical representation.



**Figure 2:** Sets of  $(\alpha, \gamma)$  pairs.

The four hyperbola branches in the Figure 2 correspond to the four cases related to the following four equalities:

$$\gamma = 2/\alpha, \quad \gamma = 2.4495\dots/\alpha, \quad \gamma = 2.5699\dots/\alpha, \quad \gamma = 3/\alpha;$$

these hyperbola branches form four regions in the first quarter, named A, B, C, D.

If  $(\alpha, \gamma)$  belongs to the open region A, there is a potential convergence to the stable steady state  $u^*_2 = -\alpha/\beta$  that is equivalent to  $U^*_2 = [(\alpha \gamma) / (1 + \alpha \gamma)]$ .

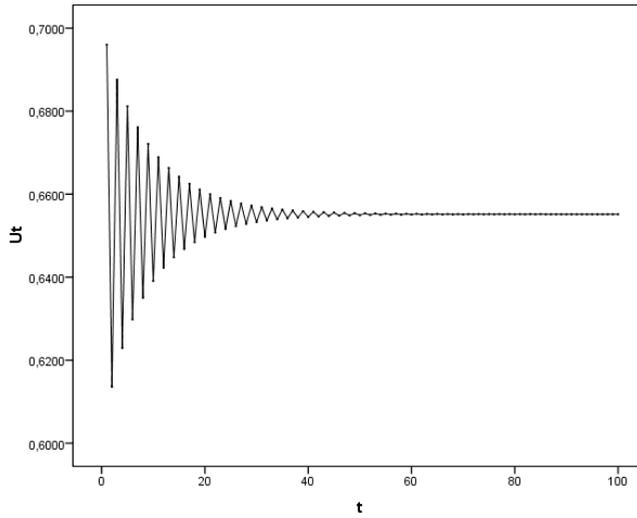
If  $(\alpha, \gamma)$  belongs to the open region B, there is the first bifurcation and a 2-cycle.

If  $(\alpha, \gamma)$  belongs to the open region C, bifurcations double over time and there are cycles characterized by increasing periodicity.

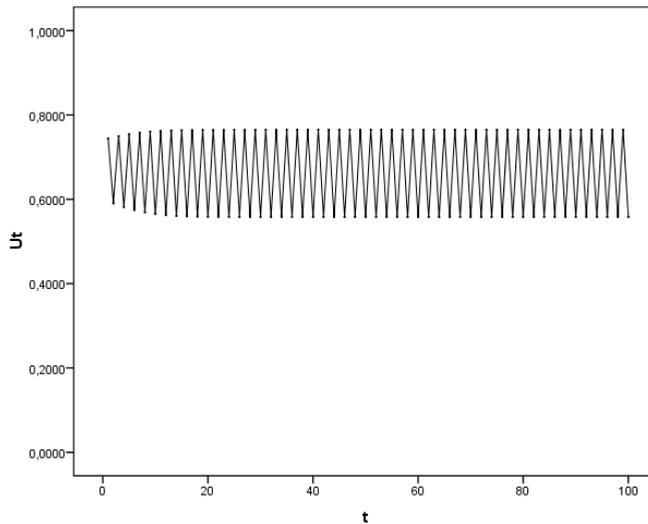
If  $(\alpha, \gamma)$  belongs to the open region D, there is the onset of deterministic chaos.

If  $(\alpha, \gamma)$  belongs to the branch  $H_1$ , there is one bifurcation; if  $(\alpha, \gamma)$  belongs to the branch  $H_2$ , there is a first doubling of bifurcations; if  $(\alpha, \gamma)$  belongs to the branches  $H_3$  and  $H_4$ , there is deterministic chaos.

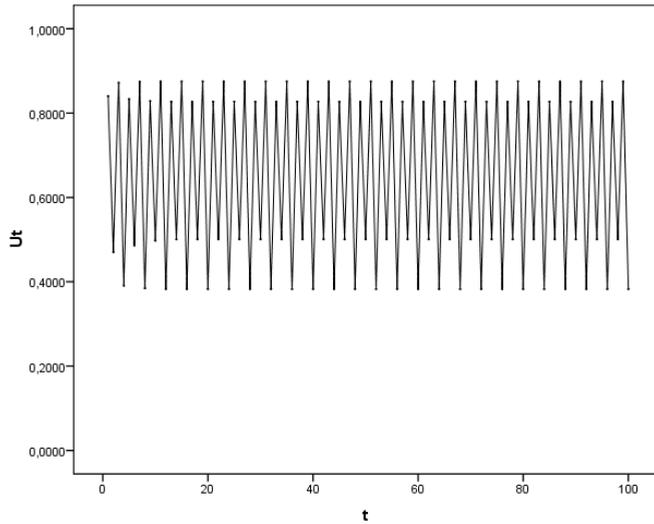
The following four graphs represent different cases corresponding to four values of the parameter  $(1 + \alpha \gamma)$ . In these graphical representations the axis variable is time and the ordinate is the supporting variable  $U_t$ .



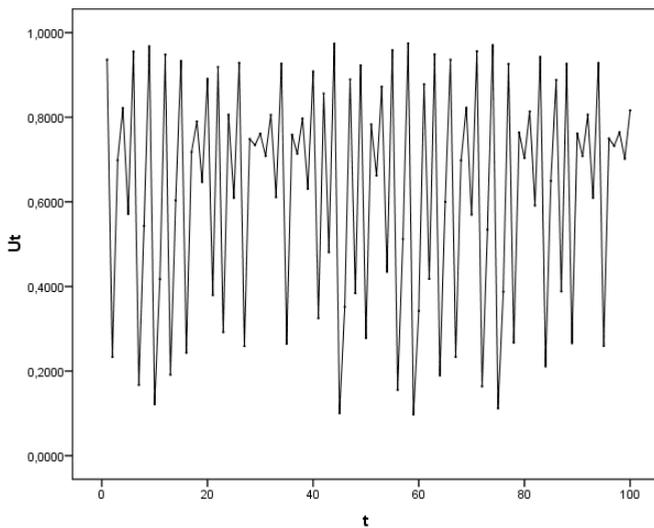
**Figure 3:**  $U_0 = 0.4$ ,  $U_1 = 0.696$  and  $(1 + \alpha \gamma) = 2.9 \leftrightarrow \gamma = 1.9 / \alpha$   
 (convergence to the only stable steady state  $U^* = [(\alpha \gamma) / (1 + \alpha \gamma)] = 0.655$ )



**Figure 4:**  $U_0 = 0.4$ ,  $U_1 = 0.744$  and  $(1 + \alpha \gamma) = 3.1 \leftrightarrow \gamma = 2.1 / \alpha$   
 (one bifurcation – a cycle of periodicity 2)

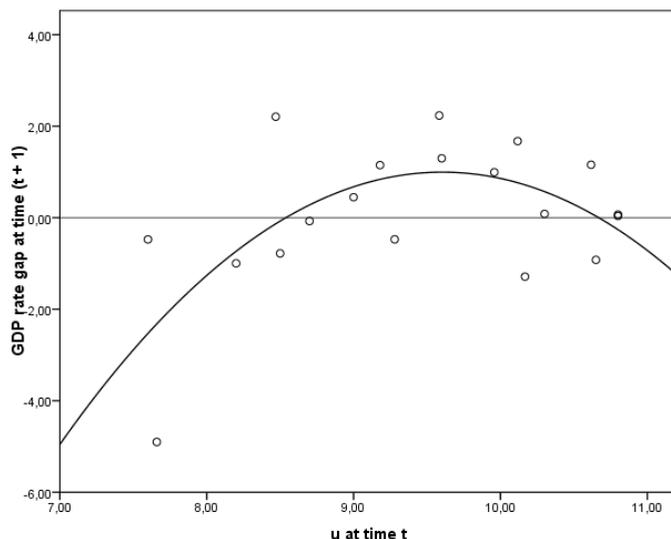


**Figure 5:**  $U_0 = 0.4$ ,  $U_1 = 0.84$  and  $(1 + \alpha \gamma) = 3.5 \leftrightarrow \gamma = 2.5 / \alpha$   
*(a first doubling of bifurcations)*



**Figure 6:**  $U_0 = 0.4$ ,  $U_1 = 0.936$  and  $(1 + \alpha \gamma) = 3.9 \leftrightarrow \gamma = 2.9 / \alpha$   
*(deterministic chaos)*

The main contribution contained in this paper is the proposal of a method for reviewing *Okun's Law*, moving from the observation of real data that often show a non-linear relation between the GDP growth rate gap and the unemployment rate of the previous period, according to the hypothesis expressed by equation (2). The following graph represents this type of relation for European aggregate data.



**Figure 7:** Relationship between *GDP* rate gap and the unemployment rate of the previous period for the *Euro Area* (17), 1994-2012

Source: Our elaborations on *IMF* data

## 5. Conclusions

The study contained in this paper is the theoretic step of the analysis aimed to formalize the relation between unemployment rate and real output growth.

The main contribution of this work is the method used to examine this link.

The analytical approach moves from the idea of the existence of an economically significant non-linear relation between the gap ( $g_{t+1} - g_{t+1}^e$ ) and the unemployment rate.

Another important result of this paper is the individuation of conditions to avoid the onset of the unpredictability of the unemployment rate. The relevance of these conditions is due to the following equivalence: unpredictability is equivalent to uncontrollability because of the total absence of information about the future value of the variable to be controlled.

The study itself has to be completed by the econometric determination of the coefficient  $\alpha$  and  $\beta$  of the quadratic relation (2) which expresses the dependence of the *GDP* growth rate gap on the unemployment rate of the previous period.

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***SUB-SECTION: TOURISM***





# THE FACTORS APPEARANCE AND DEVELOPMENT OF RURAL TOURISM

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**Abstract:** *In this paper we try to show as well the main factors of the emergence and development of rural tourism in order to establish priorities in the joint action of local people, entrepreneurs, tourists and local and national administrations. In many countries, the tourism industry fall within government priority. Tourism has been identified as one of the primary industries with potential to support local communities in developing economic diversity. Rural tourism has developed due to revenue growth (it is mostly discretionary income), due to increased leisure life and diversification motivations and desires of tourists. Tourism development is favored by improving infrastructure, historical monuments and architectural restoration and promotion of environmental conservation. Rural areas have a special attraction for tourists because of the distinct characteristics associated with mystical, cultural, historical, ethnic and geographical. For progress together with profit for those involved, it requires several components: attractions, investment, appropriate infrastructure, services and diversified hospitality promotion. To run this set of factors need to join entrepreneurs and public administrations. From the literature we can draw a number of necessary conditions for the development of rural tourism and a number of motivations for its support. The public sector is responsible for policy formulation, research and planning, development of basic infrastructure, the development of certain landmarks, establishment and management of service delivery standards, establishing management measures and recovery planning and environmental protection, setting standards for training and improve employment, maintaining public health and safety. The private sector is responsible for the development of accommodation services, travel agency operations, the activity of commercial tourist enterprises, development of landmarks and advertising through specific marketing activities, all based on existing infrastructure provided by public administration. We believe that a revision of an important part of approaches that have appeared in the literature in terms of the concept of rural tourism, in terms of methods of analysis of tourism activities and, not least, requiring the use modern techniques for foresight indicators by which to make assessments on these activities.*

**Keywords:** rural tourism; development factors

**JEL classification:** *M1; M19*

## **1.Introduction**

Today, in many countries, the tourism industry fall within government priority, which is why there are numerous national and international projects of large scale and offer stimulation programs for economic development. In this situation is that the program and Romania join the European Union had the priority areas agriculture and tourism.

From the literature we can draw a number of necessary conditions for the development of rural tourism and a number of motivations for its support. Implementation of policies and plans tourism is the responsibility of both governments and private sector entrepreneurs.

The public sector is responsible for policy formulation, research and planning, development of basic infrastructure, the development of certain landmarks, establishment and management of service delivery standards, establishing management measures and recovery planning and environmental protection, setting standards for training and improve employment, maintaining public health and safety.

The private sector is responsible for the development of accommodation services, travel agency operations, the activity of commercial tourist enterprises, development of landmarks and advertising through specific marketing activities, all based on existing infrastructure provided by public administration.

In general need to implement tourism, was deduced from the experience of countries that are considered to have pioneered in the field, such as Montana in the U.S.A, where the employment rate in tourism, in 2000 was 7% compared to only 1.5% in agriculture, and if we refer to the UK in 2001, tourism income were double those obtained by livestock, according the same sources (Sharpley, Craven, 2001).

We believe that a revision of an important part of approaches that have appeared in the literature in terms of the concept of rural tourism, in terms of methods of analysis of tourism activities and, not least, requiring the use modern techniques for foresight indicators by which to make assessments on these activities.

The role of those involved in tourism is to seek to better meet the diversified demand of tourists given increasingly broad range of desires and experiences desired by them (experience or desire to explore, experience biotic, social experience and experience optimized).

In this paper we try to show as well the main factors of the emergence and development of rural tourism in order to establish priorities in the joint action of local people, entrepreneurs, tourists and local and national administrations.

## **2. Materials and methods**

For analysis of several aspects of rural tourism research was conducted by scientific reading, organization and systematization of information and ultimately benchmarking data, performed both in theory and in practice.

## **3. Results and discussions**

### **3.1. Factors appearance of the rural tourism**

The appearance decline of traditional rural occupations, such as agriculture, mining and forestry, since three or four decades, rural communities determined to explore alternative means to strengthen their economic base (Byrd, Bosley, Dronberger, 2009).

As a result, rural communities approached alternative activities or industries to strengthen and diversify their economies. Tourism has been identified as one of the primary industries with potential to support local communities in developing economic diversity. However, tourism is a cure, but it is only cure for the economic downturn because it induces both positive and negative effects. For tourism

development all activities must be coordinated as well constructed strategic plans and management and then managing to do with maximum responsibility.

Rural areas have a special attraction for tourists because of the distinct characteristics associated with mystical, cultural, historical, ethnic and geographical (Wilson, Fesenmaier, Vanes, 2001). Rural tourism is less expensive than traditional tourism and therefore can more easily establish development strategies and to attract tourists with more modest incomes. But this kind of tourism can not develop without the participation of local small businesses, and can not be totally independent companies outside of the community.

New attraction holiday is oriented to satisfy desires of the potential tourists addressing four different areas of life experience, the desires of tourists that are required but offered sometimes simultaneously (Snack, Baron, Neacsu, 2001):

- experience or desire to explore (from an ordinary walk into a geographic area known or unknown to participation in some agricultural work) that reaffirm the need for travel, it does come back, it causes regeneration;

- experience biotic (the tourist is finding himself unknown skills or capabilities in rural areas);

- social experience (integrated in social manifestations of a rural tourist location, together with individual satisfactions experienced in different small communities created spontaneously);

- experience optimized (it has a tourist complex expected satisfaction and intended to create a feeling of self, feeling it was "good" and that recent experiences have added value to its existence).

The fundamental components of a tourism product that is offered for sale through a distribution network can be considered as follows:

- a. equipment (structures) for receiving and restoration: reception, accommodation and catering - is the primary component of the touristic product and premise of retaining the visitor stay. In addition to the investments required to build new structures of renovating existing ones is imperative to achieve minimal civilized standards (Wilson, 1999). Our opinion is that the use of the term "restoration" isn't best used in this case, even if accepted by the experts who made the DEX according to which "restoration (in cooking) recently word, used more often in the literature the term instead catering for the activity including culinary production (preparing culinary, pastry and confectionery) and distribution, and drinks, activities in the specialized economic units. - In fr. Restoration ". We believe that simply catering structures would be more appropriate:

- b. elements of attractiveness: climate, landscape, historical, cultural, quality tourist services, strong reasons to return to a destination;

- c. communication infrastructure: access roads, transportation, telecommunications, transport services - that can be included in the package or left to customer choice. A constant affecting tourism activity and the choice of rural tourist destinations is transport infrastructure (Gartner, 2005) whose role was and still is ignored in the regions of Eastern and Southeastern Europe. Almost all studies showed the transport in these regions its weaknesses, so negative impact on tourism activity (Dickinson, Robbins, 2008);

- d. human elements: civic education, technical, professional and cultural knowledge, aesthetic education, hospitality (tourism is known as a "hospitality industry"). During the last three decades have established a lot associations and NGOs whose main object of supporting tourism and organizing conferences to

discuss research works results and their implementation (Pforr , 2001). Our opinion should not be ignore human resource training for the preparation and implementation of projects to attract EU funds reimbursable or partially reimbursable. For countries that joined the EU in recent period these funds could be the most important financial resource.

e. additional equipment: permanent: recreational, sports and cultural facilities, own facilities of holiday center for spending a varied and attractive leisure; occasional: cultural, artistic or commercial activities (fairs, expositions, festivals). In many cases(Wilson, 1999; Gorz, Kurek, 1999), even if it was not too rich sightseeing, tourists have expressed a desire to spend time in some rural areas for desire to exploit the opportunities for outdoor recreation (biking, walking, horse riding, climbing, rafting or walking with rafts).

To implement tourism in general and rural tourism so, conditions need to be met, such as:

- action program in the first stage of development, generally the first five years of the plan is done as part of the whole process of programming tourist then periodically, updated and adapted to the new socio-economic conditions. Action program must include public and private projects including infrastructure, attractions, facilities and services necessary to ensure that development is integrated, comprehensive and coordinated as possible. A comprehensive action program must describe each project, indicate the estimated costs of each development project area have all logical steps and their sequence and indicate the factors responsible for each stage of the project;

- zoning, is important for the implementation of land use plans for all tourist facilities in areas of attraction. The rules of zoning requires the existence of standards development such as tourism density, the upper and lower levels. They can be separately adopted for each tourism sector. Zoning must be made to develop areas near tourist areas, so that they are compatible with tourism development;

- administration of sites, architectural and landscape design must be made by a panel of architectural analysis. This committee should consider and make changes, if necessary, all tourism development proposed projects to ensure compatibility with natural resources and harmonize with the environment and local architectural traditions;

- according to some authors (Mccool, Moisey, Nickerson, 2001), the review of quality life showed a number of problems when you want to implement sustainable tourism. Here, the views of residents on quality of life are often critical in implementing tourism development policies. Economic development activities such as tourism, are seen more as a tool than as an purpose;

- establishment of tolerance limits of an area or region presents other problems. For example in the Czech Republic government policy was to establish several tourist routes and where investments were concentrated (Holland, Burian, Dixey, 2003). This strategy has determined to overcrowding of these areas. We present the Prague metropolitan area, which, according to the same source, record 60% of the national tourism receipts, phenomenon imposed disperse tourists to other adjacent areas, and perhaps just as attractive, but obviously with other specific, so they imposed new development projects in other areas. Growth limits, however, may be difficult due and only some appropriate policies at the right time can reduce negative effects (Saarinen , 2006);

- also the idea of harmonious development and dispersal of tourism activities can remember that often invest in less sought by tourists or high demand areas, but investment remained one step behind. We call here a study done on the correlation between supply and demand of accommodation of tourists in NV development region of Romania (Barbu, Olah, 2010).

Supporting promote European village in international tourism, and the country's internal rural heritage special is supported mainly by the following:

a. knowledge and promoting heritage items that arouse of tourists interest and curiosity to enjoy living and civilization other than those that are used daily, have these great possibilities the increasing number of tourists in tourist areas with low weight tourism;

b. system fragmentation holidays and school holidays for a stay of 4-5 days in rural areas;

c. choice of tourist destinations in neighboring or distant countries, as a result of border crossing facilities, customs formalities and getting some original tourism products;

d. continuous development of cultural tourism and support new forms of manifestation, which has increased interest to cultural values of the villages;

e. increasing request of accommodation with modest comfort and low prices, especially in rural guesthouses;

f. diversification of rural leisure activities which include some adventure sports activities and desire to know of natural biodiversity.

After all, how forms of services taking place in the Romanian rural area now demonstrates the need to strengthen alternative activities as:

- there is growing aging rural workforce;
- migration intensifies from rural to urban;
- required increasing participation of women in economic activities;
- emerges slowing and even loss artisan-crafted skills;
- skills and management of rural services are not clearly strengthened in a form-legislative methodology;
- diminishing role of agriculture is found, a manufacturer of raw materials (less than 10% of PIB in developed areas, compared with 30%, on average, in the developing countries);
- is more visible development of farms under the impact of technological and managerial revolution in the rural areas.

### **3.2. Factors that determine the development of rural tourism**

Rural tourism has developed due to revenue growth (Botezat, 2003) (it is mostly discretionary income), due to increased leisure life and diversification motivations and desires of tourists. Then it's about other factors that may favor the development of rural tourism, namely:

- ✓ growth levels of education, asserting the originality and authenticity of the tourism market of cities or regions with tourism potential developed or expansion;
- ✓ Improved quality of transport and communications;
- ✓ increasing demand travel offers customized according to the wishes of tourists and funds that they are willing to spend;
- ✓ increasing interest in health maintenance;

- ✓ pronounced development of sports equipment industry and tourism;
- ✓ increasing interest from global, national, district and local administrations;
- ✓ development of telecommunications. Mobile telephony, which has grown exponentially I might say, led to an increase in demand for trips or holidays spent in tourist areas, but also helped pensions owners to organize their work better, skin showed by the mass media in some economic issues.

Tourism development is favored by improving infrastructure, historical monuments and architectural restoration and promotion of environmental conservation. This is why tourism should be considered an important factor in social and economic development of a country and rural areas in particular.

If we consider the types of rural tourism (cultural, curative, religious, adventure, rest and recreation, for winter sports, for hunting and fishing, transit, etc.) we can say that the demand is influenced by the situation overnight stays a number of factors such as seasonal calendar of religious holidays, restrictions on hunting or fishing, planned vacations periods of pupils and students and not least infrastructure and weather conditions.

Addressing rural tourism sector like any other economic activity to progress together with profit for those involved, it requires several components: attractions, investment, appropriate infrastructure, services and diversified hospitality promotion (Wilson, Fesenmaier, Vanes, 2001). To run this set of factors need to join entrepreneurs and public administrations.

In our opinion, this list of components required for tourism to progress plans should be completed with some very well documented and carried out by experts in the field and, most importantly, a strategy for medium and long term development of tourism, strategy must be an integral part of the general development strategy of the area.

Development of rural tourism and implementation travel plans requires long-term efforts and sometimes consistent investments. Modalities of implementation are:

- approval policy and tourism plan, as an official document of the tourism development in the region and managing development for a longer period than five to ten years;
- planning development projects and necessary actions and efficient organization of public and private sector;
- adoption and implementation of relevant legislation and regulations for tourism development and measures such as environmental protection and development standards;
- efficient and systematic funding of individual tourism projects and public sector to develop attractions and infrastructure tourism;
- preparing and training staff in all tourism activities - human resource development in tourism and local community involvement in tourism development;
- tourism marketing and efficiency advertising of tourism across the region and private firms;

During 1990-2000 in South America and the Caribbean Islands a number of factors have marked losses in the tourism industry (Strizzi, Meis, 2001): economic and financial instability, structural unemployment, inflationary pressures, unequal income distribution, urbanization underway, risks safety and security, health threats, limitations in aviation infrastructure and political uncertainty.

Occurrence of diseases or epidemics also determine to lower demand for tourism. Mad cow disease in the United Kingdom (Sharpley, Craven B, 2001), for example, had a strong impact economic on losses to farmers. In particular, the tourism industry

had losses between 140 and 500 million pounds only to England and worldwide about 5 billion euro only in 2001.

In Romania, more than ten environmental organizations in the Apuseni Mountains battle with local administration to reduce pollution and deforestations (Abrudan, Turnock, 1999), important factors in the development of rural tourism. Apullum Zlatna enterprise polluted Ampoiu river, from Zlatna to the confluence with Mures, using old technology. Then dust polluted 30,000 ha of agricultural land and 49,000 ha of forest. Abusive deforestation for two centuries determined to soil erosion and higher frequency of floods and flood threatening. Excessive use of grazing by large areas of grasslands rental owners sheep from Sibiu area, determined to damage to the ecological balance. We have not found statistics by which to observe a decrease in the activity of rural tourism in these cases, but we believe that the affected areas were less visited by tourists.

According to specialists opinion in the field, shared view of new human resources has an important place in all tourism activities, thus developing human resources for tourism should be a priority in providing quality services expected by the tourist. This requires a systematic approach to design personal needs and establish training procedures necessary to provide qualified personnel both in the public and private sectors.

Chaotic, unscheduled development or without serious pre-feasibility studies of rural tourism sector has determined to competition in the job market between agriculture and tourism (Fleischer, Tchetchik, 2005).

It is also essential to use techniques and methods tourism marketing, targeting and marketing strategies and implementation of a promotional program. Marketing activities must take place in the government tourism offices, local tourism office and the private sector for the development of a positive image of the new potential tourism markets tourism sector is very important.

In a study about students has shown that inappropriate behavior on trips and camps, they have determined parents to not allow them free vacations for keep under observation (Mattila, Apostolopoulos, Somnez, 2001). This determined the touroperators and tourism service providers to address more carefully the behavior of pupils and students.

#### **4. Conclusions**

The concept of rural tourism had a series of additions based on socio-economic development of society, increasingly diversified demand of tourists, but also to a change in the great mass tourism resorts established.

We conclude that factors that stimulate more sustained affirmation of rural tourism are:

- increasing time assigned for recreation, which is generally an important factor in the development of rural tourism. A particular issue that has implications for rural tourism is multiplying short periods of time allocated to leisure. To these are added the possibility to make a staggered holidays. Correlating this with other factors such as reduced duration of transport, cost of stay, the deficit of short term tourist solutions, that rural selecting prospects holiday as space is increasing, at least for short periods of time;

- increased interest in maintaining the health, aspect recorded a spectacular growth. Although currently in our country, how to obtain food is less artificial than

industrialized countries, it is also true that stressors generated by economic instability, failures and pollution of the big cities, affecting increasingly health of the population. Orientation more obvious purpose of stay for leisure activities, sports, daily release from tension is natural and part of a strategy more or less deliberate health maintenance. Rural areas are excellently placed to provide satisfying the most diverse and sophisticated options, from walks in fresh air, biking, climbing or hiking, the quiet fishing parties to the satisfactions offered drinks and traditional food tasting;

-authenticity is increasingly required or sought by tourists. Coming mostly from an saturated with audiovisual environment, dominated of products by highly industrialized, districts of blocks dull, impersonal collective relations, more and more tourists appreciate authenticity, naturalness of country life, warmth specific to small rural communities. Sociological surveys conducted so far show that the quality is ranked second by the quality of landscapes, between motives underlying the option for stay in the country;

-peace and wellbeing are more elements sought by many tourists, which is not surprising, given the level of stress, specifically most workers. Mechanisms underlying the displacement of the tourism activity are diverse and often subtle. Voluntary aspiration occurs frequently leaving the city life. The idea of escaping into nature is found almost universally among today's urban desires, and her realization often occurs in rural areas. The man wants usually alternating calm with animated emotions and, therefore, not surprising leave home for the possibility of being able to find the pleasure in the quiet, unpolluted, far from the constraints of urban activities, rural areas being the that can answer all these needs;

-assertion of individualism on market. Systematic and persistent promotion of certain products to earn a stable segment of consumers is a practice commonly used to impose various tourist consumer products markets. Rural tourism is able to capitalize on this opportunity can be particularly beneficial in circumstances where there is motivation and competence for advertising and sale offer, or receive tourists. Needs to develop a profitable rural tourism are based transformations on should take place in rural areas to meet the ever-increasing and diversified demands of modern tourists (Glavan, 2003):

-civilization and comfort standards development of households according to their originality and typological diversity;

-change the mentality, giving up a way of thinking summarized by the words "anything goes" or "go anywise" and understanding the requirements and the need for professionalism and performance in the tourist activities. As generous as offer some components, it does not prove to be profitable only if it manifests in a system that integrates all the factors that define the tourism product (accommodation, pension etc.);

-tourist movement, animation, various activities, services, friendliness, cleanliness exemplary, attention for detail, etc.);

-entrepreneurship and entrepreneurial development among the natives.

The future looks promising for rural tourism due to a increasing interest to spend time in the countryside and outdoor activities and due to increase free time and duration of holidays. This we consider promising future and because the entrepreneurs are not required to invest too much money, but most important condition is that governments make available infrastructure.

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# SUSTAINABLE TOURISM AND ITS FORMS – A THEORETICAL APPROACH

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**Abstract:** *From the second half of the twentieth century, the importance of the tourism industry to the world economy continued to grow, reaching today impressive figures: receipts of almost \$ 1,000 billion and direct employment for over 70 million people (WTTC 2012), without taking into account the multiplier effect (according to the same statistics of WTTC, if considering the multiplier effect, the values are: \$ 5,990 billion in tourism receipts, and 253.5 million jobs). We can say that tourism: has a higher capacity to generate and distribute incomes compared to other sectors; has a high multiplier effect; determines a high level of consumption of varied products and services. In this context, voices began to emerge, which presented the problems and challenges generated by the tourism activity. Many regions are facing real problems generated by tourism entrepreneurs and tourists who visit the community. Therefore, at the end of the last century, there were authors who sought to define a new form of tourism, which eliminated the negative impacts and increased the positive ones. As a generic term they used alternative tourism, but because of the ambiguity of the term, they tried to find a more precise term, which would define the concept easier. Thus emerged: ecotourism, rural tourism, Pro Poor Tourism etc.. All these forms have been introduced under the umbrella concept of sustainable tourism. In the present paper we will take a theoretical approach, in order to present some forms of sustainable tourism. During our research we covered the ideas and concepts promoted by several authors and academics but also some international organizations with focus on tourism. We considered these forms of tourism, as they respect all the rules of sustainable tourism and some of them have great potential to grow in both developed and emerging countries. The forms of sustainable tourism we identified are: ecotourism, pro-poor tourism, volunteer tourism and slow tourism. In the second part of this paper we presented both the pros and the cons of each of the identified forms.*

**Keywords:** *sustainable tourism; ecotourism; slow tourism; pro poor tourism; volunteer tourism*

**JEL classification:** *L83; Q56;*

## **1. Introduction**

Sustainable tourism has emerged in response to the increasingly negative impacts of the tourism industry in the destination-regions. So, sustainable tourism has emerged as a reactive concept, which seeks to eliminate the negative impacts (economic, social, cultural and environmental) that might outshine the benefits tourism brings to host- communities.

Since the early '90s, the concept of sustainable tourism began to be used more often in academic and, to a lesser extent among tourism entrepreneurs. Although

some early forms of the concept have been used earlier, the birth of sustainable tourism was the publishing of the first issue of the *Journal of Sustainable Tourism* in 1993 (Weaver 2006:10; Hunter 2002:3; Dodds and Butler 2009:43).

This new form of tourism involves small companies and entrepreneurs, with the stated purpose for community conservation and protection of local culture. One of the most important voices of the alternative tourism, David Weaver, thought that "the main difference between the old and new forms of tourism is the glide of the focus from the wellbeing of the tourist to the welfare of the community" (Weaver 1998:31).

At that time, the concept was highly debated and it was received with hostility by the tourism industry, dissatisfied to put any limits to growth. It was considered by many an "ivory tower" unrelated to the real market. Sustainable tourism was also considered "intellectually arrogant, expensive, elitist and useless" (Lane 2009:20). This attitude was not limited to the tourism industry. Governments and local authorities have not taken the concept seriously, the classical model of tourism bringing them significant benefits. Conventional mass tourism, generated jobs and wealth transfer from developed countries to developing ones. The mass - media did not pay very much attention to the concept of sustainable tourism, noting that it is much easier to denigrate than to explain it. There were academics and researchers who considered sustainable tourism "an impossible dream" (Lane 2009: 21). This was best explained by Wheeler: "on one hand we have the problems of mass tourism, which is growing steadily and uncontrolled. And what is our response? The development of small, slow and controlled. It is simply impossible! (Wheeler in Miller and Twining-Ward 2005:32)

There are many definitions of sustainable tourism and/or the sustainable development of tourism, and we believe that this multitude of opinions is just a sign of the lack of a global consensus.

Hunter (2002:4) believes that although the concept of sustainable tourism is derived from sustainable development, sometimes it is considered as an independent and distinct concept from other sectors of the economy.

Some authors (Hunter 2002:5, Swarbrooke 1999:18) believe that "tourism development should provide economic benefits to all partners (stakeholders), provided they do not adversely affect the resources available for future generations." Weaver (2006:10) defines sustainable tourism as "a form of wise exploitation, so you can conserve it for the long-term."

According to another definition, sustainable tourism represents "all forms of tourism (conventional or alternative) that are compatible with and contribute to sustainable development" (Liu 2003:461). In the context of this definition, development does not necessarily imply growth, being essentially a process by which specific social and economic objectives are achieved. Achieving these goals may involve stabilization, increase, reduce, change or loss of product quality, existing firms or industries.

From the perspective of the World Tourism Organization, sustainable tourism is defined as: "Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities" (<http://sdt.unwto.org/en/content/about-us-5>).

We can say that, although there is no uniform definition of sustainable tourism, there are some common points in each of the above: benefits for the entire community, protecting resources and the environment, reducing negative impacts etc. Thus, sustainable tourism should harmonize and balance three elements: economic,

social and environmental.

Initially, sustainable tourism focused mainly on protecting natural resources, the main reasons for this are the following: the high interest of environmental organizations, evidence of environmental degradation due to tourism, the dependence of tourist destinations on global environmental condition, the relative ease of counteract the physical impact of tourism on the environment, compared to the socio-cultural, which is much more difficult to annihilate, and the advertising that can benefit a destination by showing interest in environmental protection (Butler 2000:339).

After 2002, with the launch of World Tourism Organization's ST-EP (Sustainable Tourism – Eliminating Poverty) program, the attention was focused on social issues, especially considering the fact that this initiative was based more on the general development of the country and not just protecting natural tourism resources.

There are many authors who argue that sustainable tourism is a form of tourism which is in contrast to mass tourism, aimed at a relatively narrow niche of people interested in the negative impact that tourism can have. This is an extremely dangerous point of view. It should be clearer that sustainable tourism is defined as tourism based on the sustainable development principles and it has a fundamental objective: tourism as a whole must be sustainable. The term should reflect a condition of tourism and not just a form. Mass tourism, properly organized and controlled, can and must become sustainable.

In this context, we identified four independent forms of tourism, which respect all the principles of sustainable tourism: ecotourism, pro-poor tourism, volunteer tourism and slow tourism.

## **2. Research methodology**

The objective of our paper was to identify specific forms of tourism either sustainable or mass, which respect the principles mentioned in the introduction. Also, after identifying them, we presented the main pros and cons that these forms face.

There are many forms of tourism, identified by some authors as being sustainable or alternative. According to the place of destination we have: ecotourism, urban alternative tourism and nature based tourism. According to the type of accommodation we have: guesthouse tourism, farm-based tourism and backpacking. Our concern is that these forms of tourism are not very strict, and raise many concerns regarding the respect of the principles of sustainable tourism. This is the main reason our focus was on forms of tourism based more on motivation. This is why, the most important forms of tourism we have identified are: ecotourism, pro-poor tourism, volunteer tourism and slow tourism.

As we can notice, they have no limitations regarding the accommodations and/or the place of destination.

The tourists that choose these forms of tourism can use, for accommodation, a tent or a guesthouse, as their focus is on the activities involved.

At the same time, these forms of tourism can be practiced in both remote natural areas and in the middle of cities.

## **3. Findings**

Although the literature and the practice offer numerous examples of sustainable tourism packages, we have chosen four forms of tourism which represent the best examples of putting theory into practice. The four forms of tourism we identified are:

ecotourism, pro-poor tourism, volunteer tourism and slow tourism.

### **3.1. Ecotourism**

Ceballos-Lascurain, the father of ecotourism, considered it a philosophical and multidimensional concept, a component of eco-development that requires planning based on strict rules. He suggested that the ecotourists have an enormous amount of information about the natural and cultural resources they visit, and were involved in the conservation and protection of resources. Also, Ceballos-Lascurain identified a number of differences between people who practice mass tourism and ecotourism in terms of natural resource usage. Both types of tourists are interested in natural resources, but mass tourism practitioners have a passive role in the relationship with nature, practicing activities such as water sports, jogging and cycling. Ecotourists, on the other hand, are attracted to natural resources and try not to abuse them, practicing photography, botanical studies and observing wildlife (Ceballos-Lascurain in Diamantis 1999:96). We conclude that, from the perspective of Ceballos-Lascurain, ecotourism is essentially passive and must be practiced in protected areas, thus having a positive impact on the environment.

Ziffer has a different perspective on ecotourism: "ecotourism is a form of tourism inspired primarily by the natural history of an area, including existing indigenous cultures. Ecotourists visit underdeveloped regions, in a spirit of appreciation, participation and sensitivity. Ecotourism uses without consuming natural resources and contributes directly through employment or money, and preserve the welfare of the local people (Ziffer in Diamantis 1999:98).

In turn, the International Ecotourism Society gives us a different definition of ecotourism: "responsible travel in natural areas of environment and enhance local welfare "(TIES 2006).

As you can see from the above definitions we can conclude that ecotourism is a form of tourism in the natural environment that oscillates between passive or active attitude of the tourists regarding conservation and nature protection.

Laarman and Durst (in Orams 2001:28) described in 1987 the hard and soft dimensions of ecotourism. The terms hard and soft cover how interested are the ecotourists in the natural resources of a destination and the physical effort they are willing to do. A hard ecotourist is willing, or even wants to benefit from reduced comfort and to travel longer in difficult conditions in the wild, in order to truly experience nature. By comparison, a soft ecotourist has a casual interest in natural resources and wants to experiment on a superficial level within a relatively short time span.

It is quite difficult to assess the ecotourism market, because of the confusion stemming from its definition. According to some authors (Diamantis 1999: 29), the segment of tourists visiting natural resources and wildlife generates between 20 and 40% of total tourism receipts. The most important ecotourism destinations in the world are: Alaska, Amazon, Antarctica, Blue Mountains (Australia), Borneo, Botswana, Costa Rica, the Dominican Republic (Caribbean Sea), the Galapagos Islands, Himalayas (Nepal and Bhutan). With regard to these destinations we can see some common features: are located in relatively remote areas with poor accessibility; are located in countries with a lower level of development; provide a high concentration of plant and wildlife species; are not traditional destinations for mass tourism.

Due to the increasing demand for ecotourism, classification criteria or eco-labels

began to appear for the accommodation units, different from the standard (number of stars). Although there are several classification systems worldwide, the International Ecotourism Society (TIES 2007:12) established some common components: voluntary registration facility; well-defined standards and criteria; • analysis and audit; grant and permission to use a logo; regular audit for certification renewal; continuous improvement; transparency; defining standards through participatory mechanisms.

In 2007, the World Ecotourism Conference was organized in Oslo, Norway. According to the Oslo Declaration on Ecotourism, international agencies, governments and all those involved in ecotourism planning must take into account the following courses of action (TIES 2007): 1. recognizing the important role that ecotourism plays in sustainable local development; 2. maximizing the potential of well managed ecotourism as an economic factor, central to natural conservation and cultural resources; 3. support the performance and activities of the ecotourism businesses through effective marketing and through education and training; 4. control of critical issues to strengthen its sustainability.

### **3.2. Pro-poor tourism**

This form of tourism has emerged in the UK, from the initiative of the Overseas Development Institute, and it considered that tourism can play a major role in eradicating poverty (Beeton 2006:200-201).

Pro-poor tourism (PPT) is defined as "a form of tourism that results in net benefits for the poor" (PPT 2004a). PPT is not a very well defined tourism product but rather an approach to management and tourism development. A key element is that, in many cases, the poor are the owners of the tourism resources: natural resources and cultural festivals and so on, and in the past, unfortunately, their role was ignored. By accepting this reality, governments, development agencies and tourism organizations can develop strategies to help communities (Beeton 2006:202).

Although the benefits mentioned above are important, Sofield et al. (in Beeton 2006:202) identified a number of issues that must be taken into account in the future: exposure to operational risk - poor communities lack the education and skills to prevent exploitation of the tourism industry; negative impact on traditional structures, leading to instability in the community (old vs. Youth, women vs. Males); negative impact on cultural elements due to mass production of souvenirs, modification and alteration of festivals and traditions for the entertainment of the tourist; materialism and individualism that could replace community-based organization; total or partial loss of access to natural resources (coastal, water, forests, etc.) which, for some communities, represents the main source of income.

From the above mentioned ideas, the UNWTO created the ST-EP Initiative created (Sustainable Tourism - Eliminating Poverty). The main implementation modalities of this program are: 1. Employment of the poor in tourism enterprises; 2. Providing the poor tourist firms goods and services; 3. Direct sales of goods and services to tourists, by the poor; 4. Establishment and administration by the poor of tourism agencies; 5. Differential taxation of income or profits that help the poor; 6. Support or donations from tourists and the tourism industry; 7. Investment in infrastructure stimulated by tourism, which will benefit the poor (<http://step.unwto.org/en/content/overview-st-ep-activities-0>).

Although it seems that many strategies are presented, they are focused locally, without involving changes at national or global level, where they might have a

stronger effect. As Scheyvens says, "for example, it is relatively simple (and good for public relations) to pump money into community tourism initiatives, but it is more difficult and controversial to support trade unions and workers' rights in tourism or to contest control that foreign companies and local elite have on the tourism sector "(2007:135).

### **3.3. Volunteer tourism**

Volunteer tourism is defined by Weaver (2002:45) as "a framework in which tourists are involved in voluntary work for social or environmental protection without receiving financial remuneration". Weaver believes that tourism is for people who "want, for whatever reason, to volunteer in an organized framework and to spend their holidays helping a community, restoring the natural environment and participate in research on society and the environment" (in Higgins-Desbiolles 2009:334).

In general, volunteer tourism is a chance for destination regions that will benefit from the help of volunteers, but also for tourists who will enjoy their work. A distinct feature of this form of tourism is related to the association with religious and environmental NGOs, located in the regions of origin of the tourists.

Another difference between mass tourism and volunteer tourism represents benefits. In the former, benefits are calculated as the number of tourists arriving or total receipts, which will be felt, to some extent, by the local population. Volunteer tourism generates direct benefits for local people: the construction or renovation of houses, medical or educational services (Weaver 2002:45-46). For this reason, sometimes, volunteer tourists are not perceived as tourists by the host community or themselves (McGehee and Andereck 2009:47).

Volunteer tourism focuses on two areas: improving the living conditions of the target community and the environment.

One of the most important organizations in volunteering is Habitat for Humanity, founded in 1976 by Linda and Millard Fuller. Habitat for Humanity is a Christian, non-profit organization, that aims to build homes and shelters in poorer regions of the world. Their projects are carried out on all continents, in 90 countries and 3,000 communities ([http://www.habitat.org/eurasia/learn\\_about\\_habitat/who\\_we\\_are.aspx](http://www.habitat.org/eurasia/learn_about_habitat/who_we_are.aspx)).

For environmental protection, "Conservation Volunteers" in Australia have listed what are the main benefits for tourists who decide to get involved in their projects: opportunity to make a real contribution to conservation in Australia, through effective programs; the opportunity to travel in regions with numerous natural, cultural and historical attractions, which are not on the main routes of Australia; opportunity to learn new practical techniques for conservation; social and cultural exchanges between participants from different cultural backgrounds; opportunity to learn about the visited regions, through active participation and conservation; transportation, accommodation, food and guide or project leader (Davies 2002:172).

In recent years, volunteer tourism took a new form: volunteer tourism for justice. It reflects "active partnerships in the fight against injustice of any kind and is based on the idea that partnerships need to overthrow situations of power imbalance present in many places in the world" (Higgins-Desbiolles 2009: 337). This global resistance movement crystallized due to numerous cases of social, economic or environmental injustice, caused by globalization and capitalism. Visible results of this type of tourism are demonstrations - some very violent - taking place at all international

meetings with economic issues: WTO conferences, World Economic Forum, G20 meetings etc.

Although it is difficult to criticize this form of tourism because of the extremely noble goals, there are authors who believe that some non-profit organizations involved in volunteer tourism behave like firms, are increasingly more interested in their public image, lobbying and bureaucracy at the expense of the initial target (Holmes et al., 2010: 257; Weaver 2002:47). There are even authors who raise questions about the motivations of the tourists. We cannot be sure whether such a motivation is fuelled by empathy and altruism or simply improving ones personal image and CV (Higgins-Desbiolles 2009:335; Coghlan and Fennel 2009:377-378).

### **3.4. Slow tourism**

Slow tourism stems from the slow food movement, which emerged in 1986 at the initiative of Carlo Petrini. He founded the organization Arcigola to protest against the opening of the first McDonald's in Rome (Myhrvold et al. 2011:23). The slow food movement emerged as an antithesis to fast food, representing an intersection of ecology, gastronomy, ethics and pleasure. The movement opposes the standardization of taste and culture, and unregulated corporate power in the food and agricultural industry. The movement promotes a return to cooking and to avoid the "curse" of the fast food restaurants, using local ingredients and information about the food we eat.

The principles and philosophy of slow food are easily adapted to tourism. The central idea of slow tourism is to get some quality experiences, reduced in number and to avoid holidays, where the emphasis is on quantity (Heitmann et al. 2011:117). As sustainable tourism and ecotourism, slow tourism was defined in several ways. From the perspective of Dickinson (2009:2) slow tourism represents "holidays involving shorter trips and longer stays, air transport is not used, but other forms of transport, which are more environmentally friendly, and become part of the tourist experience".

Heitmann et al. (2011:117-118) believes that slow tourism "is characterized by the joy of discovery, study and sharing, and the holiday slowdown will create opportunities to interact and establish links with local people and places at a deeper level."

Lumsdon and McGrath (2011:265) believe that essentially slow tourism means "driving a short distance and enriching experience, both on the road and the destination."

Slow tourism relies on deceleration at the expense of speed, so that the journey to the destination becomes a relaxing time, not a stressful interlude imposed between home and destination (Gardner 2009:10-11).

Slow tourism can be considered a return to the past, to pilgrimage and the Grand Tour, which largely respected the principles of this form of tourism (Dickinson et al. 2011:282).

Activities during the holidays are not much different from the other forms of tourism, but the key features - immersion and slowness - are central to the philosophy of slow, requiring more integration, research and spending more time in a particular environment, to form stronger memories. However, not all attractions have been designed to provide such experiences and many of them are forced to give a quick (fast) tour because of the popularity and pressure that a large amount of tourists generates (Heitmann 2011: 118-119).

From an economic perspective, slow tourism strategy is based on a slow growth by reducing capital flight, at the expense of rapid growth, based solely on the number of tourist arrivals. This will increase efficiency by increasing the quality. This focus on quality at the expense of quantity will increase the resilience to external shocks (Timms and Conway 2011:13).

Since slow tourism promotes the use of other means of transport, rather than air, we can ask some questions about the solutions for countries or regions at some distance from tourist generating markets (Caribbean, Maldives etc.) .

Unfortunately, Bramwell and Lane (2011:419), the editors of the *Journal of Sustainable Tourism*, believe that there is very little evidence to show that policy makers should be interested in developing a new paradigm of tourism based on the de-growth or slow tourism.

## Conclusions

In the following years, sustainable tourism will face numerous challenges from the industry, governments, local authorities and even tourists. The forms of sustainable tourism we have presented in this paper are well established on the tourism market, maybe with the exception of slow tourism, which is still in a discovery period. The only task at hand remains the marketing and advertising of these forms of tourism, in order for a larger number of persons to become involved.

From our point of view, in order for sustainable tourism to become an umbrella for all forms of tourism, significant steps should be taken in the direction of education. Through education, information can reach individuals from a very early stage in their development, and can change their attitude to become more focused on what sustainable development in general and tourism in particular, really deal with. Education is one of the few fields that transcend governments, local authorities, academics and entrepreneurs, thus it can change the attitudes of exactly the people who might represent obstacles in the future development of sustainable tourism.

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# THE EVOLUTION OF TOURISM IN THE NORTH – WEST DEVELOPMENT REGION (DURING 2009 – 2011)

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**Abstract.** Fourth year PhD candidate at the University of Oradea, under the guidance of Professor Mrs. Alina Bădulescu in the doctoral research project entitled: "Doctoral studies and Ph.D. candidates for competitive research on a knowledge based society", a co-financed project by the European Social Fund through the Operational Program for Human Resources Development 2007 - 2013, Priority Axis 1. "Education and training in support for growth and development of a knowledge based society" I chose to present this subject in order to demonstrate the connection that exists between tourism and development regions of Romania. Having as research topic "Tourism and development in the Euro regional context" I felt it would be appropriate to devote a subchapter in presenting the evolution of tourism in developing regions of Romania. The research methodology that was used consisted in documentation from the specialised literature and statistical data collection from the site <http://www.insse.ro/cms/rw/pages/index.ro.do> in order to gather representative data on the evolution of national tourism for the 2009 – 2011, in each districts of North-West. The first part of the paper presents the foreign visitors who come to Romania, hence the largest number of foreign visitors and how it evolved from 2009 to 2011 the number of foreign tourists in Romania. The second part deals with the existing tourism potential in the North-West region and the opportunities offered by the region. The three part deals with the main touristic indicators in the six counties of North-West and the differences between them. The analysis is based on the comparison of main tourism indicators showing the tourist activity in the development regions of Romania, namely: the number of arrivals, number of nights and existing tourist capacity. The last part presents the steps that should be followed to overcome the losses caused by the crisis of 2008-2009 and to ensure a positive growth of the indicators analyzed.

**Keywords:** districts of North-West; tourism potential; touristic indicators;

**JEL classification:** L83

## 1. Introduction

Romania presents a touristic potential of great diversity, which offers the tourist the possibility to choose a tourist destination in order to spend leisure time in any time of the year.

Tourism creates opportunities for regional and local economic growth, contributing all the same in creating new jobs. Thus, capitalizing tourist attractions in different parts of the country can contribute to the economic recovery of some declining urban and outlying rural areas by favouring the emergence and development of local firms,

making areas with low economic competitiveness in areas that are attractive to investors.

The indicators through which is characterized the tourist activity in Romania, in the eight regions of the country are: the number of arrivals (tourists' lodging), the number of overnights, existing tourist accommodation and the operating accommodation capacity.

Following the evolution of foreign visitors in Romania, during 2009 - 2011, it can be noted that in 2009 the global crisis also reflected upon Romania's tourism, registering a decrease of 15% compared to 2008, and in 2010 and 2011 a slight increase was recorded but without reaching the values recorded in 2008.

**Table 1:** Arrivals of foreign visitors in Romania on continents and origin states

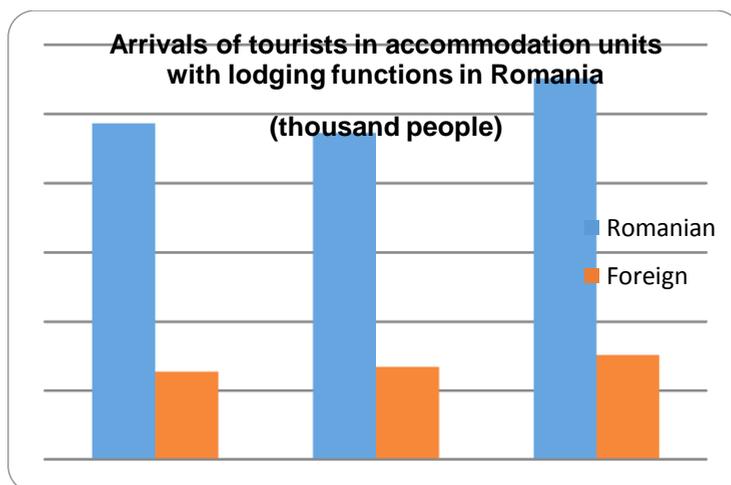
Continents and origin states of foreign visitors	Arrivals of foreign visitors in Romania (thousand people)		
	2009	2010	2011
Europe	7.203	7.098	7.180
Africa	17	21	22
America	169	171	182
Asia	171	195	211
Australia and Oceania	14	13	15
Unspecified countries	1	:	1
TOTAL	7.575	7.498	7.611

Source: made by the author based on data obtained from National Institute of Statistics, [Online], Available: <https://statistici.insse.ro/shop/>

According to the statistical data given by INS, in 2011 the highest weight of foreign visitors was represented by those from Europe with 94.3%, Asia by 2.77% to 2.39% America.

If we extend the analysis by countries located in Europe, we observe that between 2009 - 2011 the situation is almost constant, that is the largest number of foreign visitors to Romania was registered by two neighboring countries with Romania, respectively Hungary (1.546 thousand visitors in 2011) and Bulgaria (797 thousand visitors in 2011).

If in 2010 in comparison to 2009 the arrivals in the lodgings registered a slight decrease of approximately 1%, in 2011 the situation changed, the number of arrivals increasing with almost 16% in comparison to 2010.



**Figure 1:** Arrivals of tourists in accommodation units with lodging functions in Romania

Source: made by the author based on data obtained from National Institute of Statistics, [Online], Available: <https://statistici.insse.ro/shop/>

In 2011, the arrivals of Romanian tourists in accommodation units with lodging functions represented 78.4% in the total number of arrivals, in comparison to foreign tourists that represented only 21.6%.

In 2011, three regions of the eight development regions in Romania (Center-20.4%, București–Ilfov-18.25% and South – East -16.14%) represent over 50% in the total of registered arrivals in accommodation units with lodging functions.

The North – West region ranks fourth (among the 8 development regions) registering 11.38% in the total of arrivals in accommodation units with lodging functions.

## 2. The North – West Region of Romania

The North – West (Northern Transylvania) is one of the 8 development regions of Romania and includes the following counties: Bihor, Bistrita-Năsăud, Cluj, Maramureș, Satu-Mare, Sălaj. The surface of the region is of 34.159 square meters, representing 14.32% of the surface of the country, with a total population of 2.744.914 inhabitants. The region includes 421 administrative and territorial units: 6 counties, 42 cities of which 15 municipalities and 398 communes and 1.823 villages. The region has a strategic geographical position, it borders with Hungary and Ukraine as well as the Central Region, West and North - East of Romania (Regional Development Agency North West).



**Figure 2:** North-West development regions

Source: <http://www.runv.ro/harta.html>

### 2.1. Tourist Attractions in the North – West Region

The most representative types of tourism in this area are:

- Balneal and treatment tourism;*
- Mountain tourism;*
- Cultural tourism;*
- Urban and rural tourism;*

*Balneal and treatment tourism* in the region is based on the existence of thermal waters and disused salt mines. The North - West region has a rich potential of thermal waters, the most famous resorts in the region are: Băile Felix and 1 Mai (10 km from Oradea) and Sângeorz Băi. Promising potential is present also in the following localities: Tinca, Tășnad and Marghita. Also, the existence of salt mines (unfunctional) and of salt lakes from Ocna Dej, Turda, Ocna Șugatag, Băița present a special attractiveness for the tourists of the region as well as from the nearby regions.

*Mountain tourism* focuses on winter sports and extreme ones. Maramureș Mountains and the Apuseni Mountains represent excellent opportunities for the development of mountain tourism. Thus, if we take into consideration the entire region we can notice the existence of a representative number of mountain resorts: Stâna de Vale and Băișoara (Apuseni Mountains), Borșa, Piatra and Fântânele (in the Northern part of the Oriental Carpathians).

*Cultural tourism* is distinguished by popular culture and ethnographic heritage, fortresses and monuments (Oradea, Bistrița), fortified churches and monasteries of

wood in Maramureş (monuments Unesco). Also in this region are more than 170 protected areas, two national parks and two nature parks included in tourist circuits.  
*Urban and rural tourism*

In the region one can also find traditional urban areas (Oradea, Baia Mare, Bistriţa etc.) with a rich historical and cultural heritage that are (or can be) included in the tourist circuits.

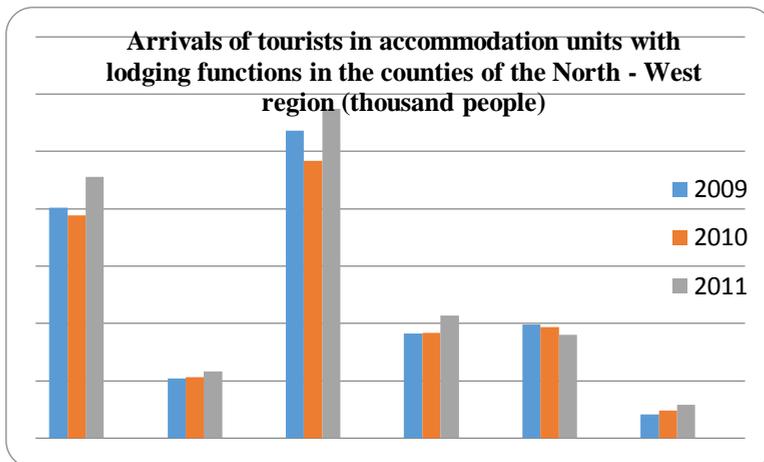
Tourist areas in the Apuseni Mountains, Transylvania, Maramureş Mountains and Transylvania Plain represent real touristic attraction for tourists eager to spend their free time in nature.

### 3. The Evolution of Tourism in the North – West Region

#### 3.1. Arrivals of tourists in accommodation units with lodging functions in the counties of the North - West region

In comparison to 2009, arrivals in accommodation units in the North – West region in 2010 registered a decrease of 4%. In 2011 we can observe a 13% increase in the number of arrivals compared to 2010. The counties that registered the highest number of arrivals in the North West were Cluj (35.9%) and Bihor (28.1%) the two counties comprising 64% of the total number of tourists in the region. On the last place is Sălaj (29,012 tourists), with a weight of only 3.62% of the total arrivals in the region.

In 2011, arrivals of Romanian tourists in accommodation units with lodging functions in the North West region represented 84% of the total arrivals, in comparison to the foreign tourist arrivals which were only 16%.



**Figure 3:** Arrivals of tourists in accommodation units with lodging functions in the counties of the North - West region

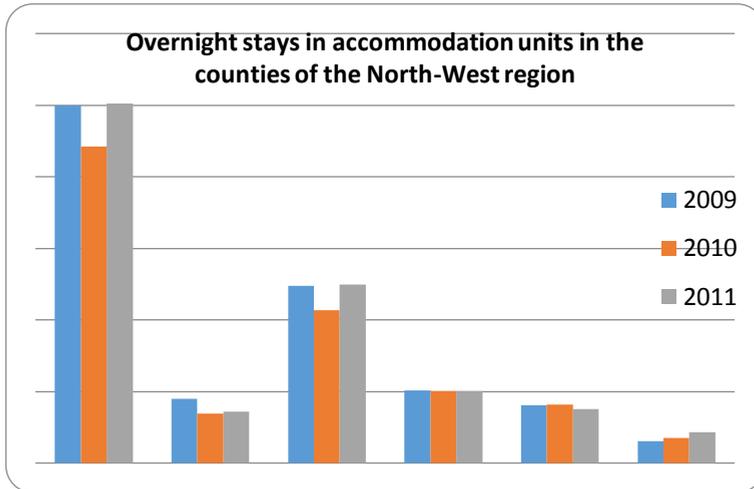
Source: made by the author based on data obtained from National Institute of Statistics, [Online], Available: <https://statistici.insse.ro/shop/>

According to INS, in 2011, the destinations chosen by foreign tourists were those of Cluj (5.75% of the total tourists) and Bihor (4.50% of the total tourists) probably due to existing tourism potential in the two counties. Romanian tourists' preferences were

identical with those of foreign tourists; the largest number of arrivals was recorded in Cluj (24% of all tourists) and Bihor (48.15% of the total tourists).

### 3.2. Overnight stays in accommodation units in the counties of the North-West region

Overnight stays in tourist accommodation units decreased in 2010 (1.885 thousand overnights) of 11% compared to 2009 (2,099 thousand overnights). In 2011 (2.085 thousand overnights), according to the figure below, can be observed a positive change, registering a value similar to that of 2009.



**Figure 4:** Overnight stays in accommodation units in the counties of the North-West region

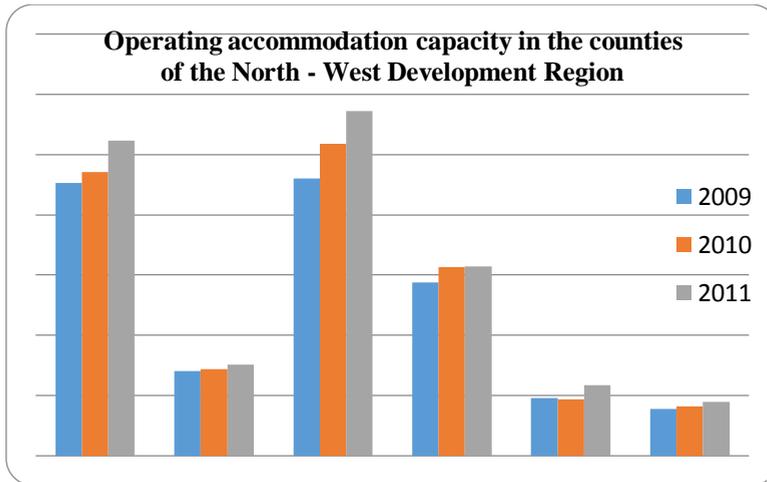
Source: made by the author based on data obtained from National Institute of Statistics, [Online], Available: <https://statistici.insse.ro/shop/>

Romanian tourists' overnight stays in accommodation units in 2011, represented 86% of the total of overnight stays, while the overnights of the foreign tourists represented 14%.

During these three years, the highest number of overnight stays in the region was registered in Bihor County representing 48% of the total of overnight stays.

### 3.3. Tourism Infrastructure in the North – West Region

In 2011, in the North – West Region there were a total of 8,831 thousand lodging places (12.90% of the total of tourist accommodation units in Romania) being placed second among the 8 regions, the first place being occupied by the Center Region which holds 12,867 thousand lodging places (18.81% of the total tourist accommodation units in Romania).



**Figure 5:** Operating accommodation capacity in the counties of the North - West Development Region (Units: places-days)

Source: made by the author based on data obtained from National Institute of Statistics, [Online], Available: <https://statistici.insse.ro/shop/>

Operating accommodation capacity showed an upward trend during the analyzed period.

Following the figure 5, between 2009 -2011, there is a relatively continuous upward trend of operating accommodation units in most counties.

In respect to the operating accommodation capacity, the most impressive growth is recorded in Cluj County, where the number of accommodation units increased in 2011 (2.858.256 number - places), 24% more than in 2009 (2,303,416 number - places). If we analyze the distribution of tourist accommodation units according to the counties in the North – West region it can be observed that most of them are in Cluj (32.36% in 2011) and Bihor (29.58% in 2011) and they withhold the largest accommodation capacity with a number of 5,471 thousand lodging places, which represents about 62% of the accommodation capacity of the North-West region and the fewest are in Satu Mare (6.63%) and Sălaj (5%).

The net use index of the lodging places in 2011 was 23.60%, in the total number of operating accommodation units, decreasing with 3.97% compared to 2009 (27.57%). This was due to the increase of the tourist accommodation capacity in 2011 to 16.57% compared to 2009, while the number of overnight stays in 2011 decreased by 0.67% in comparison to 2009.

#### 4. Conclusions

2011 (compared to 2010) represented a positive year in the evolution of tourism in the North – West region, registering an upward evolution for all indicators in comparison to 2010. Thus, in 2011 we witness a 13% increase in the number of arrivals in tourist accommodation units and in the case of the number of overnight stays and that regarding the accommodation capacity we can notice again an upward trend.

To ensure positive growth in the coming years should keep in mind the following:

Although the region has a diverse tourist potential (geothermal resources, cultural heritage etc.) is needed to develop the intervention the intervention of accessibility in the main tourist areas in the region. Certainly the lack of an international airport in Oradea prevent foreign tourists wish to visit this town and spa resorts (Băile Felix, Băile 1 Mai) located near the town.

To attract foreign tourists in this area is needed tourism infrastructure and tourism services adapting their requirements.

To ensure quality service needed hiring of specialized personnel in the tourism sector.

Seasonality is also a problem facing North-West, as one of the main strategy should be to channel on finding ways to extend the tourist season.

Another sensitive point refers to the low level of promotion of tourist areas in the region. It would be ideal to create a regional brand with which to identify that region.

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# EXPLORATORY RESEARCH REGARDING ROMANIANS' PERCEPTION ABOUT THE REGIONAL BRAND "MARAMUREȘ"

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**Abstract:** *In recent years, the expansion of touristic activities confirmed the importance of marketing activities in touristic regions. In tourism as well, globalization implies an unlimited number of options, and the traditional elements regarding competition and differences related to price or quality are no longer sufficient in efficiently differentiating the touristic region. A key factor in this sense is represented by the notion of place branding or, to be more precise, regional branding. Theoretical studies on this subject are relatively recent, and fewer compared with studies on traditional brands, for example. A practical research regarding a touristic region can thus provide a series of utile information that marketers can use in elaborating marketing strategies and, specifically, in the branding process. The study's main objective aimed at shaping the regional brand "Maramureș" using mainly projective techniques, scarcely used in studies of this kind in Romania, based on a sample of more than 200 respondents. The information obtained focused on the respondents' perceptions regarding the region of Maramureș as a touristic brand, the associations made, the values attributed to the region in terms of touristic potential, of touristic infrastructure, of weak and strong points of the touristic brand Maramureș, but also elements of the regional image and identity (at this point were considered certain associations with visual elements but also with its personality). By highlighting respondents' subjective and diverse opinions, it was aimed to point out some directions that would eventually guide a new approach of the brand for this touristic region. Also, the results of this study could represent a starting point for a program of regional development, funded through various local or European funds. Furthermore, based on the information obtained from respondents, it has been proposed a new logo of the region, as a first step in running a promotion campaign of Maramureș as touristic destination.*

**Keywords:** regional brand; regional marketing; tourism destination; tourism brand's personality; Maramureș.

**JEL classification:** M31; M38; L83.

## 1. Introduction

The study of brands designed for touristic regions is relatively recent and, according to Dumbrăveanu (2010), Ryan and Mizerski (2010) or Ashworth and Kavaratzis (2010), the number of materials in which it is discussed in detail being rather small. Among researchers who deal with it can be mentioned Lucarelli and Berg (2011), who focus on time evolution of specialty studies regarding city branding, highlighting

their growing importance. Kotler et al. talk about place marketing for the first time in 1993. But this subject became more and more popular, discussed 'as a result of the growing competition between places, cities and nations (...). Moreover, place marketing is not limited only to touristic activities, but plays an important role in urban and regional development, the positioning of the region and/or country within international relationships, as well as maintaining a constant development of economy and infrastructure.' (Maheshwari et al., 2011:198). Zenker (2011:41) affirms that in recent years the focus was increasingly more on the process of *regional branding*, as element of regional marketing: 'regions are motivated to obtain positive associations in consumers' minds in order to develop and promote the brand continuously'. However, Anholt (2005) states that the brand is a very powerful tool in the process of economic development, having a significant contribution to *regions' development*. Touristic destinations are extremely varied, this category including cities, countries, regions or any other element that is perceived as touristic objective. Regions, however, are much more diverse destinations, and the branding process highlights their complexity. So, for some authors, the destination brand is equal with the competitive identity, and represents the destination's essence and characteristics or, in other words, it is the DNA that defines that destination (Buncle and Keup, 2009).

## **2. Tourism Destination Branding**

The branding process of the destination surprises very complex elements, the main purpose being that of guarantying touristic a positive experience, from the moment they come in touch with the destination to their return home (Buncle and Keup, 2009). Nyseth and Viken (2009) stress the importance of the cooperation between the public and the private sector in the process of creating an image/an identity for the touristic destination. Many authors who have studied the problematic of *destination branding* (Hall, 1999; Buhalis, 2000; Prideaux and Cooper, 2003; Zevedo, 2004) but also that of national branding (Szondi, 2006; Rausch, 2008; Pike, 2010) underline the importance and the practical utility of the brand as a very powerful strategic process specially created for developing competitiveness and economic development of regions and countries.

According to Buncle and Keup (2009), *complexity* is a base attribute of touristic destinations' brand. Pike (2005) highlights the complexity of destination brands with the following arguments: destinations are multidimensional, the interests of various groups on the market are heterogeneous, and the theory cannot be applied due to the politics of taking a decision across all the people involved.

As an aspect associated to this complexity, *brand architecture* is very important (Hankinson, 2010), because of identities correlations at a regional level, and of choosing brand alliances (between cities or regions with different or complementary traits).

According to Morgan et al. (2004), the 5 phases within the process of building a destination brand are: (1) market research, analysis and strategic recommendations; (2) development of brand identity; (3) brand launching and introduction: communicating the concept; (4) brand implementation; (5) monitoring, evaluation and verification. According to Buncle and Keup (2009), the stages of this process are: destination audit, segmentation analysis, SWOT analysis, shareholders' commitment, competition analysis, models of brand building, brand's integration in marketing activities, global campaigns versus local campaigns, brand

global versus target segments. Moilanen and Rainisto (2009) present the model of developing the destination brand- DEBRA, based on ideas regarding brands in services belonging to de Chernatony and Segal-Horn (2003).

Balakrishnan et al. (2011) classify *the components of a destination brand* in several categories: functional elements refer to the basic function/purpose of the brand associated with tourists' immediate, practical needs; symbolic or emotional elements are those situated above the basic product, referring to attributes regarding intangible aspects; elements related to experiences include the relationship between the brand and the consumer, its intuitive preferences, the ability of the brand to communicate an exclusivity feature, a particular lifestyle.

### **3. Identity, Image and Personality of the Brand of Touristic Destination**

*Identity* captures the internal dimension of the brand, while *the image* surprises the external one (Saraniemi, 2010). *The image of the destination* contributes to the formation of the destination's brand and to its success. There are two different types of images involved in the branding process: the image projected (promoted by marketers) and the image perceived (received by tourists) (Tasci and Kozac, 2006). For Hildreth (2010), the brand is the visual representation of an entity (the brand's identity) and the collective perceptions of the entity in people minds (the brand's image). The images of the touristic destination can be classified in: organic images made on long term from a multitude of sources (mass-media, novels, and geography), induced images made from exposing to the projected image of the destination an induced modified image or a complex image, based on the interaction of touristic experience with organic and induced images (Fakeye and Crompton, 1991). *Brand's personality* is part of the branding process of a touristic region (Avraham and Ketter, 2008). Go and Govers (2009) state that the personality of the brand and that of the destination are correlated concepts, which sustain the idea that regions, especially through the process of branding, can be attached to human's personality traits. Forristal (2009) analyzes the personality of the brand in respect to Aaker's model. Aaker (1997) presents the five dimensions of the brand's personality: sincerity, enthusiasm, competence, refinement and strength, which, at their turn, have other subcategories.

Ashworth and Kavaratzis (2010) also stress the importance of *brand's personality*, suggesting that the places in competition should be associated with famous persons, such as artists, persons, celebrities.

Morgan et al. (2004) surprise two side of the personality, namely the rational side and the emotional side: the first refers to the logic traits of the brand, and the second refers to its emotional benefits and associations. Using only one slogan or logo is not sufficient but, according to Hankinson (2005), Hildreth (2010), Maheshwari et al. (2011) many campaigns rely solely on these elements.

### **4. Regional Branding**

Creating a *regional brand* is the core element in promoting local competitiveness, especially when regions and cities try to compete for external resources, using their brand. So, it is not an unusual thing to notice a national brand playing the role of umbrella-brand for its regions, and the regions to have the role of umbrella-brand for the cities (Boisen et al., 2011). Region's branding is seen as a 'process that permits a place to develop through its strong points, to find the sense adequate to its complex and multidimensional traits, as well as the variety which characterizes

its past, present and future identity' (Maheshwari et al., 2011: 201).

According to the authors Ashworth and Kavaratzis (2010), the brand, whether it's national or regional, must be seen as a multidimensional concept, with functional, emotional, relational and strategic elements, which create a unique set of associations in the mind of the public. Regional brands must be distinct, but still to have similarities, to integrate within the national brand. The difficulties of coordinating activities arises from the fact that regional brands cannot be controlled by one entity or organization, but they are developed and offered through a complex network of public and private actors (Dinnie, K., 2009). Another feature mentioned by many authors is the similarity and the comparison of regional touristic brands with corporate brands. Anholt (2005, 2010) compares the nation with a corporate brand, and Moilanen and Rainisto (2009) states that regional brand resembles with the umbrella-corporate brand.

In creating *region's identities*, an important role is held by symbols (names, logos, customs, etc.) (Mueller and Schade, 2011). Kotler et al. (1993) argue that the image of a place or a region can be positive and attractive, negative and weak, mixed (with both negative and positive elements) or contradictory (when the region's image is positive for some tourists and negative for others). The diversity of the actors involved in the creation and development of a regional brand is very high. Destination's marketing organizations (DMO) represent an important active element in the branding process. Dinnie (2011) underline the participation of residents and tourists. Taking into consideration the region's inhabitants has numerous advantages, these being the first that should know, understand and share the values of the region they live in. *Regional identity*, as an element of the regional brand, is perceived as a sustainable competitive advantage" (Go and Govers, 2009: 49), and for long term sustainability, regional brands need a strategic management (Ryan and Mizerski, 2010).

## 5. Research Methodology

The importance given to the process of development of the regional brand and to the marketing programs thoroughly sustained by all active participants depends on the extent to which each country understands the positive effects brought by a powerful touristic brand. It was chosen the analysis of the touristic regional brand Maramureş because it is a representative area for Romania's tourism. However, the methods used for promoting the area have a low degree of efficiency, are not fully adapted to the target audience, promotion campaigns are not very well-known even among residents, and market research to highlight deeper the opinions of those involved and affected by touristic activities are practical inexistent.

The *main objective of the research* is to analyze the perceptions and the opinions people have about the touristic region of Maramureş, as a touristic brand, but also of the values assigned to it. Starting from this general objective, there were established *several derivate objectives*, as following: the analysis of the elements which form the image of the touristic region and those which determine its identity (visual elements, as well as personality traits), respectively identifying weak and strong points of the touristic brand Maramureş.

*The research hypotheses* focused on the fact that:

1. Respondents have generally positive opinions on the touristic region Maramureş.
2. Respondents associate the region with tradition, folklore and less with modern

elements.

3. Respondents consider that touristic promotion is poorly implemented.

As *data collection method*, it was chosen the survey (punctual among a judgmental sample of the studied population) combined with a series of indirect methods, namely projective tests. Besides the types of tests mentioned above, there were included also several response matrices through which was followed the association of the regional brand with a series of personality traits. The population studied was formed out of people who knew the region of Maramureş, either personal (residents or tourists), or indirect (based on information provided by mass-media, friends, family or acquaintances). *The size of the sample* studied was of 248 respondents.

## 6. Research Findings and Discussion

Opinions regarding *tourism generally practiced in Maramureş* reveal both positive and negative elements: the majority of the respondents (67.7%) highlight the touristic potential of the region, because of particular natural elements, Maramureş's traditions but also the openness of the residents and of the hosts towards tourists. If 12.9% consider satisfying *the level of touristic services* in the region, a higher number of respondents (19,4%) consider them unsatisfying.

Approximately a third of the persons interviewed (32,3%) claim *that tourism promotion is insufficient*, even though there are many development opportunities through concrete measures ('creating more info-points for tourists', 'lack of promotion abroad, among foreigners'). 19,4% from the respondents highlighted a series of region's traits through their own experiences as tourists in Maramureş ('it is a unique touristic experience, but I get informed and I asked around as a tourist, from Internet sources').

12,9% of respondents presented more forms of tourism specific to the region of Maramureş (rural tourism, religious tourism, cultural tourism, agritourism, ecologic tourism). Through *several association tests was aimed to identify what is the opinion of the respondents regarding the current situation of tourism in Maramureş*. The answers reveal even more complex aspects: the majority (87,1%) believes that there isn't enough promotion and exploitation of the region's touristic potential.

Other options have been manifested in lower proportions: the lack of online promotion campaign (32,3%); authenticity, uniqueness through traditions, people and landscape (29%); poor participation of local authorities and residents, lack of investments, lack of coordination between the traditional environment and the appearance of touristic hostels or poor promotion within foreign tourists (22,6%); poor infrastructure which lades tourists' access (12,9%); an optimist vision of the regional tourism, which is still developing/ improving (9,7%).

As for *Maramureş's touristic potential*, the first aspect mentioned by respondents was the diversity and the uniqueness of the region (41,9%), but also the traditions specific to the region (38,7%). In addition, 22,6% of respondents expressed their dissatisfaction with the way in which the potential touristic is exploited (inefficient and insufficient), while 19,4% stressed a defining element: wood art, represented by the specific gates and the wooden churches. Only 9,7% from the respondents mentioned agritourism as the most important aspect of touristic potential.

*Elements that are mostly associated with Maramureş* in the mind of the respondents are: nature (51,6%), local people features (48,4%) and tradition (41,9%). Fewer people mentioned traditional food (29%), famous touristic sights (22,6%) or wood art (19,4%). Besides these aspects, respondents mentioned in their answers:

traditional clothing and music (12,9%), a feeling of retrieval (9,7%), authenticity (9,7%), famous people such as Paula Seling or the Rednic couple (6,5%), color (6,5%), hiking (3,2%) and the city of Baia Mare (3,2%).

At the question regarding *the image of Maramureş region*, more than half of the respondents described the landscape of the historical Maramureş (58,1%), followed by mentioning the traditional Maramureş gates (22,6%), as well as very famous sights such as ‘Mocăniţa’ or ‘Cimitirul Vesel’ (19,4%).

16,1% of respondents have thought of people dressed in traditional clothing, followed by churches and Sunday’s religious sermons or holiday days (9,7%), the image of a museum in open air (9,7%), persons singing traditional music (2,4%).

In order to discover *the personality traits associated with Maramureş*, it was used an open question, through which respondents had to associate the region with a person and to describe the way she or he would interact with it. A large number of respondents associated with the region an open, cheerful, lively, sociable and welcoming person (41,9%); a wise, empathetic, good-hearted, compassionate, hardworking and caring person (38,7%). Furthermore, approximately one-quarter of the respondents (25,8%) associate the region with a bold, intelligent, charismatic and sincere person. However, some respondents, besides the traits mentioned earlier, associated the region: with a caring mother or a grandmother in traditional clothing (25,8%).

*Applying the five-category brand personality Aaker model (1997):* excitement, sincerity, competence, sophistication and ruggedness (Table 1), respondents associated the region to a higher extent with a merry, honest, incorruptible, with a strong spiritual character, loyal and intelligent person, a charming person and into a higher degree with inventiveness and dearness, but less with a modern character.

**Table 1:** Regional brand Maramureş’s personality dimensions

Dimensions		Mean	Dimensions		Mean
Excitement	Daring	3.77	Competence	Reliable	4.06
	Spirited	4.48		Intelligent	4.06
	Imaginative	3.71		Successful	3.84
Sincerity	Up-to-date	2.42	Sophistication	Upper class	2.00
	Down-to-earth	3.03		Charming	4.00
	Honest	4.42	Ruggedness	Outdoorsy	2.87
	Wholesome	4.10		Tough	2.48
	Cheerful	4.69			

Source: authors’ calculations

Closely related to image and personality, identity is the central element on which marketers focus in creating and strengthening a regional touristic brand. The vast majority of the information obtained from respondents focus on the image these have already formed about Maramureş but also on the personality of the brand (Table 2).

**Table 2:** Maramureș's representative aspects

	Mean		Mean
Wood art	3.68	Museums	2.52
Wood churches and monasteries	3.61	Landscapes	3.55
Art clothing and fabrics	3.65	Baia Mare	2.81
Ornamental pottery	3.00		

Source: authors' calculations

In *creating a positive image*, many respondents (61,3%) support the importance of correlating well-organized touristic services with distinct elements of the region (traditions, folklore, wood art, landscapes). 54,8% consider that touristic sights must be efficiently valued at a local, national but also international level. 29% of the respondents believe that the brand must be sustained and developed through well done campaigns and actions, focusing on the necessity of developing touristic infrastructure.

*Campaigns of creating identities* are extremely complex and require substantial resources, in this case focusing on one of identity's components, namely proposing a logo. From all the general categories that determine in a lesser or greater extend the positive appreciation of Maramureș, the most representatives, according to opinions expressed by respondents are: wood art, clothing art and fabrics, wooden churches and monasteries but also Maramureș natural landscapes. These categories exposed to respondents broadly outline the traits of a region which still conserves unaltered and unchanged elements of culture, folklore and history.

## 7. Conclusions

From the prior set of assumptions, most of them have been confirmed, *so the image of Maramureș in the eyes of the respondents is a positive one, and these put a great accent on traditional elements that offer uniqueness and a distinct character of the touristic region and less on modern elements*. Descriptions and arguments offered by the respondents offered the image of a region with a huge touristic potential, mainly represented by traditions, customs and famous objectives. However, Maramureș brand requires a deeper, more profound analysis, but which, according to the study should be based on the following:

1. *Region's characteristics*: wood art and culture, customs and habits of the traditional village of Maramureș, the hospitality of the people, Maramureș's traditional clothing and fabrics, unique touristic objectives, nature, cultural and religious elements;
2. *Rational benefits*: unspoiled natural elements, especially outstanding mountain landscapes, accessibility, escaping from the urban space, an oasis of relaxation, new experiences;
3. *Emotional benefits*: reconnecting with the traditions and the culture of Maramureș, a feeling of freedom, openness, return to everything that means customs and elements of authentic folklore, spiritual peace correlated with natural landscapes, special memories;
4. *Values and traits of the brand's personality*: this regional brand reflects, according to the respondents, the idea of openness, sociability, courage, charisma but also wisdom and faith, a mix of resistance and fragility, all in correlation with traditions that define the touristic region and reflect its distinctive

character;

5. *The brand's essence*: tradition and nature, optimism and openness, continuity. As far as a possible logo of Maramureş is concerned, it must be representative for the region, with suggestive and defining elements, but in the same time simple and effective. Analyzing all the information obtained through this research, traditions and folkloric elements are definitely very suitable for creating the logo.

More precisely, wood art is one of the most distinctive elements through which it could be indicated at a visual level regional identity. The actual logo reflects the outline of a wooden church, however, an even more representative and fit element, which cannot be found in any other region of the country is the traditional Maramureş gate, conclusion which results from the study as well.

Among the motifs present on a traditional gate can be mentioned: the nods, the rope, the solar wheel that appears as a simple circle, of some concentric circles, sun with human face (the solar cult), the tree of life, the ear of corn, etc. Also, it is recommended to focus on the solar motif present on the gate as a dominant symbol. The solar disc in a simplified form combines traditionalism with the dynamism specific to the Maramureş region, through the nuance and the forms used. Also, the logo would convey an idea of continuity, optimism and openness.

These are only a few guidelines that could lead to a more precise outlining of the regional brand Maramureş, part of a much larger project of regional branding, which seeks to reinforce the touristic brand Maramureş at all levels.

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## APPROACHES TO ANALYZE THE QUALITY OF ROMANIAN TOURISM WEB SITES

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**Abstract:** *The decision to purchase the tourism product is influenced by the information provided to the tourist. The Internet information, which is the primary source, is used. The tourists choose the company based on the information provided. The main purpose of an online agency is to sell vacations. On the other hand any online agency must respond to user needs even if they are not always commercial (obtaining impressions of a destination, documentary on cheap destinations, etc.). The purpose of our work is to analyze travel web-sites, more exactly, whether the criteria used to analyze virtual stores are also adequate for the Romanian tourism product. Following the study, we concluded that the Romanian online tourism web-sites for the Romanian market have the features that we found listed on similar web-sites of France, England, Germany, etc. In conclusion, online Romanian tourism can be considered one of the factors of economic growth.*

**Keywords:** *tourism; tourism on-line; ITC in tourism; quality of a web site; testing the consistency; usability rules.*

**JEL classification:** L86, M15, M31

### Introduction

“Tourism is one of the most important economic sectors in the European Union. Furthermore, tourism is the sector with the highest growth rate within the European economy. The European tourism industry will be marked by an important process of transformation, as more and more clients are interested in the attractive offers presented online. Tourists give up traditional services offered by airlines, travel agencies and tour operators to take advantage of the lower prices for packages available on the Internet”. [web1]

“According to a recent estimate of the main players in the U.S. tourism market, within at the most 5 years, online companies will have the majority, practically, tourism becoming the largest industry on the Internet. A forecast justified by the extent that the Internet has got worldwide, in the recent years, in the tourism industry, not just overseas. The United States are the leader in online tourism, mainly because of the higher Internet access rates, estimated at 90% for 2013”. [web1]

The information has become a commodity, an essential resource. Each information provider (hotel chains and associations, restaurants, car rental companies, travel agents, national tourist offices) should respond to this challenge: the provision and organization of information easily accessible and attractive, reliable and updated.

Online tourism has profits also in the crisis period. Among the ten trends noticed by ANAT regarding tourism in 2011: the importance of social media and online as a distribution channel has increased.[web2]

### **Related Work and Statistical study**

Considerations relied on analysis performed in this work were:

1. As the tourism product does not actually exist at the time of sale. Usually, upon purchase, the product represents the information on the booking paper or computer. The tourist buys the right on the product. Upon the selling, the tourism product represents only the information about the offer. The product may not be tested before being purchased. Thus, the decision to purchase the tourism product is influenced by the information provided to the tourist. Furthermore, the Internet information, which is the primary source, is used. The tourists choose the company based on the information provided. The holder of qualitative and updated information has priority.
2. The pace at which the Internet has grown is amazing and it transforms completely the online reservation domain. At present, there are hundreds of online travel agencies where one may choose and the market is consolidating around major distribution channels, allowing them to charge high commissions and impose inflexible terms; although online travel agencies exercise great power, the digital revolution has made customers have the control ... as it should be - stated in an online publication by horeca.ro
3. "Online tourism has grown in the recent years, so, in February 2011, there were 446 million visitors registered to travel sites, worldwide. As a result of the increased interest in tourism portals, in 2010, the international tourism operators assigned average budgets between 60,000 and 80,000 USD for online promotion, according to a study made by Cornell University. Of the preferred methods for online promotion, we noticed Facebook, Twitter and YouTube. In the recent years, Romania has also agreed with the international trends in the field of online promotion in tourism". posted by G. Stefan on his blog [web 3]
4. "Top 10 is selling very well". This is achieved through the desire to send information, etc., by various criteria. It is well accepted that there is no standardized system to which we and also the operators in the industry may relate when talking about how a business should be or should be managed, so that everyone does as they see fit. Further, we concluded that each type of web-site has a different type of analysis [web4]
5. Technologies; everyone knows W3C or RGAA, but the user has different needs and requirements in accordance with the ergonomic, loading speed or SEO. As shown by the researchers conducted in 2010 and 2011, the searching of travel web-sites is on the 5th place among the interests of the Romanians.[web5]

Articles and papers regarding the quality, ergonomics or an audit of web site that we had as a starting point can be summarized:

- a. a series of articles like "barometer" referring to the online tourism in Western European countries, which retain the following titles: "Le 1er baromètre de la qualité web des sites touristiques" available at [web5], "A chaque type de sites Web, sa méthode spécifique d'évaluation" available at [web6]

- b. analysis related of sites banks, ministries, insurance companies in Romania available at [www.tree.ro](http://www.tree.ro) [web7]
- c. analysis conducted by researchers from roumanian universities [web9], tourism specialists in online comments on blogs [web3], [web10], etc.
- d. analyses performed on Romanian online shops to illustrate the degree of development of e-commerce, competition authors used several criteria available at web13.

The research method used in this study is the survey and the data collection tool is the questionnaire. The questionnaire was made combining various quality analysis criteria of the virtual entities, taken from [web7, web8, web11, web12,web13].

The purpose of the questionnaire is to analyze travel web-sites, more exactly, whether the criteria used to analyze virtual stores are also adequate for the Romanian tourism product. The questionnaire obtained had to be structured into six main chapters / sections. Chapter / Section 1 contains 11 criteria (note from C1 to C11) with the purpose to verify the theory according to which for three clicks, one may get the desired information. Chapter / Section 2 contains two sub-criteria with the purpose to verify the existence of the information on Legal & Trust. Chapter / Section 3 contains 27 criteria with the purpose to verify the existence of classical but complex architecture of the web-site (ergonomic organization of the information on the company policy, products and services). Chapter / Section 4, suggestively called easy Sign-up, verifies the existence of 4 classical elements for the achievement of this activity. Chapter / Section 5 measures the existence of 10 elements necessary / important / vital for the process of booking the tourism product in the virtual environment. In our opinion, these 10 elements should be present on all tourist web-sites. Chapter / Section 6 verifies the possibility of online booking and the use of electronic payment instruments. In this section, we wanted the evaluators to determine how well this tool is developed on the web-site by giving marks from 1 (very poor) to 5 (very good).

The questionnaire was filled in / reviewed by 16 people, aged between 20-30 years old, with average to good knowledge related to the use and development of software products. As this is the first phase of our research, we thought that it was important that the persons who made the evaluation to have high knowledge in order to achieve the quality coherence of this instrument (questionnaire) for the analysis of Romanian tourist web-sites. The tourist web-sites analyzed were found for several months in the top of the surveys conducted by various online publications.

Study hypothesis: The chapters of the questionnaire are a tool for the validation of the web-site quality, in terms of user perception and satisfaction. The Romanian tourist web-sites comply with the usability rules, criteria and principles available in the virtual space. [web5, web7,web8, web11,web12,web13]

Hypothesis 2. According to Nielsen's theory, web-sites allow one to obtain the information within three clicks.

Hypothesis 3. The web-sites include complete information on their legitimacy and confidence as legal entities.

Hypothesis 4. The web-sites have an ergonomic organization of information (in terms of quantity and quality).

Hypothesis 5. The web-sites present easy sign-up

Hypothesis 6. The web-sites present a complete procedure to acquire the tourism product

Hypothesis 7. The web-sites include electronic payment instruments.

The applied statistical analysis is that specific to dichotomous data that the evaluators used in order to specify the existence (value 1) or non-existence (value 0) of the criteria that make up the first 5 chapters of the questionnaire. The results of the analysis are presented below:

To test the second hypothesis of the study, we applied the test for measurement of the ratio rate (REA) which measures the probability of fulfillment / failure to fulfill the criterion. In this context, the analysis required the tracking of the users' responses who graded 1. The purpose of this analysis is to determine if there are inconsistent criteria. The result is drawn in Table 1.

**Table 1.** Achievement of the analyzed criteria

Parameters-Criteria	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11
<b>P</b>	<b>0.775</b>	<b>0.75</b>	<b>0.77</b>	<b>0.563</b>	<b>0.663</b>	<b>0.775</b>	<b>0.825</b>	<b>0.613</b>	<b>0.88</b>	<b>0.788</b>	<b>0.9</b>

Source: : own calculations

The analysis results show that the 11 criteria as determined by evaluators are consistent and present in all the 5 web-sites evaluated. The criterion having the lowest consistency is c4 and the criterion c11 obtained the best score. So, it is required that the owners of the analyzed web-sites to improve the web-site as related to the criteria studied, paying more attention to the criteria having  $p < 0.6$ . Please note that the value of  $p = 1$  means that all evaluators gave the maximum score to the said criterion.

The research hypothesis shows differences between the score obtained by the 5 companies studied regarding the Home Page criteria. To verify this hypothesis, we applied the Kruskal-Wallis test (Chi-Square = 13.479,  $p$ -value = 0.009) and we noticed differences between the scores obtained by each company.

**Table 2.** Statistically descriptive

Web sites	Mean	Std. Deviation	95%CI for mean		Min	Max
Site1	9.06	1.389	8.32	9.80	6	11
Site2	8.88	1.708	7.96	9.79	4	11
Site3	6.38	2.849	4.86	7.89	1	11
Site4	7.81	1.721	6.90	8.73	5	10
Site5	8.63	2.029	7.54	9.71	5	11

Source: : own calculations

To determine which web-sites generate differences in terms of scores, we applied the Mann-Whitney test. According to the Mann-Whitney test, the score obtained by web-site 1 is not significantly different from web-site 2 ( $p$ -value = 0.838) and from web-site 5 ( $p$ -value = 0.696), but it is significantly different from the average score obtained by web-site 3 ( $p = 0.004$ ) and the average score obtained by web-site 4 ( $p$ -value = 0.035). The study shows that the average score obtained by web-site 1 is greater than the average score obtained by web-site 5 and web-site 3. To determine

which of the five sites studied generate differences, in terms of scoring, we applied the Mann-Whitney test, whose result is: the score obtained by web-site2 is not significantly different from web-site5 (p-value=0.867), but it is significantly different both from the average score obtained by web-site3 (p = 0.007) and the mean score of web-site4 (p-value = 0.04). The study also shows that the average score obtained by web-site 2 is greater than the average score obtained by web-site 5 and web-site3. We applied the Mann-Whitney test to determine that the score obtained by web-site 3 is not significantly different from the one obtained by web-site 4 (p-value = 0.128), but it is significantly different from the score obtained by web-site5 (p= 0.021). The study shows that the average score obtained by web-site 2 is lower than the average score obtained by web-site5 and web-site 3. Next, we applied the Mann-Whitney test according to which the score obtained by web-site5 is not significantly different from web-site 4 (p-value = 0.184).

In the literature[Kuder 1937], [Cortina1993] [Feldt1989], [Webb\_Shavelson\_Haertel2006] there are several opinions regarding testing the internal consistency of dichotomous items. We have considered appropriate in the present study to use Kuder-Richardson (KR21, KR20) for them is analogous to Cronbach's  $\alpha$ , except Cronbach's  $\alpha$  is also used for non-dichotomous (continuous) measures[Kuder 1937].

The statistical analysis was continued by calculating the internal consistency coefficient of the dichotomous item called Kuder-Richardson (KR21), and the fidelity calculation is obtained through Kuder-Richardson coefficient (KR20). [Opariuc] The result of the Kuder-Richardson coefficient (KR20) is  $r_{KR20} = 0.65$ , so the degree of fidelity of the questionnaire items to measure the obtaining of information by three clicks is acceptable. The result of the Kuder-Richardson (KR21) coefficient is  $r_{KR21} = 0.60$ . So, *hypothesis 2* of the study is achieved. The web-sites allow the obtaining of information with three clicks, according to the Nielsen principle.

In this context, we applied the Cohen's kappa test to test the correlation between the evaluators and the result obtained is: between web-site 1 and web-site 2 Kappa = 0.253 with p <0.001 fair agreement; web-site 1 and web-site 3, Kappa = 0.378 with p <0.001, fair agreement; web-site 1 and web-site 4, Kappa = 0.430 with p <0.001, fair agreement; web-site 1 and web-site 5 Kappa = 0.357 with p <0.001, fair agreement; web-site 2 and web-site 3, Kappa = 0.364 with p <0.001, fair agreement; web-site and web-site 4 Kappa = 0.350 with p <0.001, fair agreement; web-site 2 and web-site 5, Kappa = 0.320 with p <0.001, fair agreement; web-site 3 and web-site 4, Kappa = 0.459 with p <0.001, moderate agreement; web-site 3 and web-site 5, Kappa = 0.492 with p <0.001, moderate agreement; web-site 4 and web-site 5, Kappa = 0.438 with p <0.001, moderate agreement. We have made the interpretation of Kappa results according to his theory (Landis & Koch, 1977).

We continued the study by testing the existence of the legal dimension of the studied web-sites. The evaluators marked 1 if the site provides information on the collection and processing of personal data (information, defining goals, individual rights) and zero, thus, the result is:

Web-sites	web-site 1	web-site 2	web-site 3	web-site 4	web-site 5
P	1	0.5	0.875	0.8125	0.875

Following the study, we obtained the following hierarchy: web-site 1 on the first place, followed by web-site 3 and web-site 5, followed by web-site 4 and on the last position, web-site 2.

We have also made a test related to the confidence of the evaluators in the existence of the trademark of the company name / web domain and its reference on the web-site. The result is:

Web-site name	Web-site 1	Web-site 2	Web-site 3	Web-site 4	Web-site 5
p	1	0.625	0.688	0.688	0.813

The evaluators decided unanimously that the web-site 1 presents both the trademark with the name / domain and this is clearly stated on the site. In the case of web-site 2, 19% of the evaluators decided that the information on this subject is absent. In the case of web-site 3, respectively web-site 4, 31% of the evaluators decided that the information on this subject is absent. In the case of web-site 2, 38% of the evaluators decided that the information on this subject is absent. So, hypothesis 3 of the study is moderately fulfilled.

Hypothesis 4 of the study refers to a possible agreement between the grades of the evaluators regarding the presence / absence of the basic elements of the architecture of the studied web-sites. To test this hypothesis, we applied the test of PHI associations for all 5 sites. The results are: web-site 1 is poorly associated with web-site 2 PHI = 0.236, p-value = 0.000; web-site 1 is moderately associated with site 3 PHI = 0.414, p-value = 0.000; web-site 1 is poorly associated with web-site 4 PHI = 0.395, p-value = 0.000; web site 1 is poorly associated with web-site 5 PHI = 0.394, p-value = 0.000; web-site 2 is poorly associated with web-site 3 PHI = 0.326, p-value = 0.000; web-site 2 is poorly associated with web-site 4 PHI = 0.307, p-value = 0.000; web-site 2 is associated with web-site 5 PHI = 0.299, p-value = 0.000; web-site 3 is associated with web-site 4 PHI = 0.451, p-value = 0.000; web-site 3 is poorly associated with web-site 5 PHI = 0.479, p-value = 0.000; web-site 4 is poorly associated with web-site 5 PHI = 0.444, p-value = 0.000. We may conclude – generally, there is a good agreement regarding the organization of information on the 5 web-sites.

We continued the study by determining the agreement between the evaluators. In this context, we had to calculate the Cohen's kappa coefficient and the results obtained are: between web-site 1 and web-site 2 Kappa = 0.503 with p <0.001, moderate agreement; web-site 1 and web-site 3 Kappa = 0.561 with p <0.001, moderate agreement; web-site 1 and web-site 4 Kappa = 0.674 with p <0.001, moderate agreement; web-site 1 and web-site 5 Kappa = 0.293 with p <0.001, fair agreement ; web-site 2 and web-site 3 Kappa = 0.351 with p <0.001, fair agreement; web-site 2 and web-site 4 Kappa = 0.503 with p <0.001, moderate agreement; site 2, and site 5 Kappa = 0.264 with p <0.001 so fair agreement; web-site 3 and web-site 4 Kappa = 0.451 with p <0.001, moderate agreement; web-site 3 and web-site 5 Kappa = 0.227 with p <0.001, fair agreement; web-site 4 and web-site 5 Kappa = 0.237 with p <0.001, fair agreement. We have made the interpretation of the Kappa values according to his theory (Landis & Koch, 1977).

We have also calculated the coefficient of the internal consistency of the dichotomous items called Kuder-Richardson (KR21) coefficient and the fidelity of the evaluators according to Kuder-Richardson (KR20) coefficient. (Opariuc). The result of the Kuder-Richardson coefficient (KR20) is  $r_{KR20} = 0.845$  so, the fidelity degree of the questionnaire items for the measurement of the internal architecture of the Romanian travel web-sites is very good. The result of the Kuder-Richardson coefficient (KR21) is  $r_{KR21} = 0.72$  so, the internal consistency of the items measuring the architecture of the site is good. We may conclude that the 27 criteria for the testing of the ergonomic content of the web-site may also be used for other web-sites and the results are consistent with reality.

Hypothesis four of the study is fulfilled, in other words, there is an ergonomic organization of the information on the web-sites. We mention that these criteria for measuring the organization of the information have been validated for a study of web-sites in France [web5].

Hypothesis 5 of the study consists of an agreement between the marks of the evaluators regarding the presence / absence of the easy sign-up on the web-site. To test the association degree of the web-sites according to validation criteria, we calculated the PHI coefficient. The results are: web-site1 is moderately associated with web-site2 PHI = 0.524, p-value = 0.000; web-site1 is moderately associated with web-site 3 PHI = 0.570, p-value = 0.000; web-site 1 site is moderately associated with web-site 4 PHI = 0.674, p-value = 0.000; web-site1 is poorly associated with web-site 5 PHI = 0.313, p-value = 0.000; web-site3 site is poorly associated with web-site 3 PHI = 0.392, p-value = 0.000; web-site 2 is moderately associated with web-site 4 PHI = 0.524, p-value = 0.000; web-site 2 is poorly associated with web-site 5 PHI = 0.267, p-value = 0.000; web-site 3 is moderately associated with web-site 4 PHI = 0.459, p-value = 0.000; web-site 3 is poorly associated with web-site 5 PHI = 0.263, p-value = 0.000; web-site 4 is poorly associated with web-site 5 PHI = 0.244, p-value = 0.000. We may say that, generally, there is a good agreement regarding organization of the information on the 5 web-sites.

The study also includes the determination of the agreement degree between the evaluators. In this context, we had to calculate the Cohen's kappa coefficient and the result obtained is: between web-site 1 and web-site 2 Kappa = 0.502 with  $p < 0.001$ , moderate agreement; web-site 1 and web-site 3 Kappa = 0.571 with  $p < 0.001$ , moderate agreement; web-site 1 and web-site 4 Kappa = 0.684 with  $p < 0.001$ , moderate agreement; web-site 1 and web-site 5 Kappa = 0.294 with  $p < 0.001$ , fair agreement; web-site 2 and web-site 3 Kappa = 0.352 with  $p < 0.001$ , fair agreement; web-site 2 and web-site 4 Kappa = 0.503 with  $p < 0.001$ , moderate agreement; web-site 2, and web-site 5 Kappa = 0.274 with  $p < 0.001$ , fair agreement; web-site 3 and web-site 4 Kappa = 0.451 with  $p < 0.001$ , moderate agreement; web-site 3 and web-site 5 Kappa = 0.237 with  $p < 0.001$ , fair agreement; web-site 4 and web-site 5 Kappa = 0.238 with  $p < 0.001$ , fair agreement. We made the interpretation of the Kappa values according to his theory (Landis & Koch, 1977)

The analysis of chapter 4 of the questionnaire refers to the measurement of the sign-up within the 5 web-sites. The statistical analysis necessary to test hypothesis 4 consists of the calculation of the internal consistency coefficient of dichotomous items called Kuder-Richardson (KR21) and the calculation of fidelity is done by Kuder-Richardson coefficient (KR20). The result of Kuder-Richardson coefficient (KR20) is  $r_{KR20} = 0.784$ , so the degree of fidelity of the questionnaire items to

measure the sign-up on the Romanian travel web-sites is good. The result of Kuder-Richardson coefficient (KR21) is  $r_{KR21} = 0.75$ , so the internal consistency of the items measuring the architecture of web-site 1 is good. So, the four criteria designed to test the sign-up on web-sites representative for Romanian tourism may also be used for other sites and the results are consistent with reality. So, hypothesis 4 of the study is fulfilled, meaning that the studied web-sites have an easy sign-up. We mention that these criteria for measuring the organization of information on web-site 1 have been validated for a study of web-sites in France [web5].

Chapter 5 of the study is designed to measure the existence of the booking procedure. The hypothesis of the study is that there is an agreement between the grades given by the evaluators regarding the presence / absence of the basic elements of a web-sitte1. To test this hypothesis we applied the PHI associations test, whose result is: web-site 1 is moderately associated with web-site 2 PHI = 0.597, p-value = 0.000; web-site 1 is moderately associated with web-site 3 PHI = 0.460, p-value = 0000; web-site 1 is moderately associated with web-site 4 PHI = 0.434, p-value = 0.000; web-site 1 is moderately associated with web-site 5 PHI = 0.604, p-value = 0.000; web-site 2 is moderately associated with web-site 3 PHI = 0.401, p-value = 0.000; web-site 2 is moderately to well associated with web-site 4 PHI = 0.616, p-value = 0.000; web-site 2 is moderately to well associated with web-site 5 PHI = 0.730, p-value = 0.000; web-site 3 is moderately associated with web-site 4 PHI = 0.565, p-value = 0.000; web-site 3 is moderately associated with web-site 5 PHI = 0.442, p-value = 0.000; web-site 4 is moderately associated with web-site 5 PHI = 0.470, p-value = 0.000.

To test the agreement between the evaluators, we applied Cohen's kappa and the result obtained is between web-site 1 and web-site 2 Kappa = 0.596 with  $p < 0.001$ , moderate agreement; web-site 1 and web-site 3 Kappa = 0.423 with  $p < 0.001$ , moderate agreement; web-site 1 and web-site 4 Kappa = 0.418 with  $p < 0.001$ , moderate agreement; web-site 1 and web-site 5 Kappa = 0.601 with  $p < 0.001$ , moderate agreement; web-site 2 and web-site 3 Kappa = 0.376 with  $p < 0.001$ , fair agreement; web-site 2 and web-site 4 Kappa = 0.601 with  $p < 0.001$ , moderate agreement; web-site 2 and web-site 5 Kappa = 0.729 with  $p < 0.001$ , good agreement; web-site 3 and web-site 4 Kappa = 0.545 with  $p < 0.001$ , moderate agreement; web-site 3 and web-site 5 Kappa = 0.421 with  $p < 0.001$ , moderate agreement; web-site 4 and web-site 5 Kappa = 0.463 with  $p < 0.001$ , moderate agreement. We made the interpretation of the Kappa values according to his theory (Landis & Koch, 1977).

The statistical analysis continued with the calculation of the internal consistency coefficient of the dichotomous items called Kuder-Richardson (KR21) and the fidelity calculation is done through Kuder-Richardson coefficient (KR20). The result of the Kuder-Richardson coefficient (KR20) is  $r_{KR20} = 0.95$  so, the degree of fidelity of the questionnaire items to measure the acquisition procedure of the tourism product on the Romanian travel web-sites1 is very good. The result of the Kuder-Richardson coefficient (KR21) is  $r_{KR21} = 0.90$  so, the internal consistency of the items measuring the booking procedure of the tourism product is very good. So, hypothesis 6, the web-sites present a complete procedure for the purchase of the tourism product, is fulfilled. We mention that these criteria for measuring the booking procedure of the

tourism product have been validated in the case of a study on web-sites in France [web5].

The last chapter is dedicated to the determination of the existence of electronic payment instruments on the 5 web-sites. To test hypothesis 7, we calculated the average value of the marks given by the evaluators for each web-site studied in terms of this dimension. The result is:

**Table 3:** Descriptive Statistics

	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
					25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>
Site1	4.63	2.062	0	6	3.25	6.00	6.00
Site2	4.00	2.221	0	6	2.25	5.00	6.00
Site3	3.56	2.128	0	6	1.50	4.00	5.75
Site4	4.00	2.268	0	6	2.00	5.00	6.00
Site5	3.81	2.228	0	6	2.25	4.00	6.00

Source: : own calculations

We continued the study by applying the Kruskal Wallis test for the verification of the differences between the marks given by the evaluators for the web-sites. The result is shown in the table below .

**Table 4:** Kruskal Wallis Test

	Web1	Web2	Web3	Web4	Web5
Chi-Square	15.000	15.000	15.000	15.000	14.000
Df	15	15	15	15	14
Asymp. Sig.	.451	.451	.451	.451	.450

Source: : own calculations

The analysis results show: according to the average value of the marks given by the evaluators, there are no significant differences between the average value of the marks give to the web-sites. However, the fact that the average value of the grades given by the evaluators is different from zero indicates that the instrument is present on each web-site, so hypothesis 7 is fulfilled. In this context, we mention that the implementation of online payment instruments was done with hard work and in time. Given this reality, their existence on the studied sites is a step forward in this area and time will allow their improvement.

The fact that all study hypotheses are met reveals that the general hypothesis of the study (chapters of the questionnaire is a tool for validating the quality of the web-site in terms of user perception and satisfaction) is fulfilled.

## **In conclusion**

As a corollary: the study shows that the Romanian travel web-sites exist, and in addition, they comply with the rules, criteria and principles of usability available in the virtual space.

The results provided as a result of testing the questionnaire on five web-sites that were the pioneers of the Romanian tourism, on the 16 evaluators with average knowledge of IT allows us to continue applying it on other sites.

Following the study, we concluded that the Romanian online tourism web-sites for the Romanian market have the features that we found listed on similar web-sites of France, England, Germany, etc.

Now, at the beginning of the 21<sup>st</sup> century, the new technologies change the traditional situation. Any time, a new competitor may upset the value chain. Competition becomes "global", at the same time, global and local. Each tourism company may address equally the entire world, but adapting to local travel markets.

In addition, changes of the global social, economic and public policies force many institutions to begin to benefit from new technologies. We may say that the entire world is undergoing a fundamental change related to the way in which the "interaction" is made; a change led by the almost unanimous acceptance of Web 2.0 technologies, such as "wiki" sites, social networks and blogs.

In spite of cost and efficiency benefits arising from the use of the new technologies in service delivery, traditional attitudes of ownership of information and organization of companies are still barriers in the modernization process.

In the near future, the main activities will be not only B2B (business to business) and B2C (business to consumer), but also S2S (services to services): a virtual network of specialized companies that will provide value-added services. The result will be a complete customization for the consumer and the use of one to one marketing (individual tourist or travel company) and more general access to all tourist information in the world.

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# THE PERFORMANCE OF TOURISM AS A TOOL OF DEVELOPMENT FOR BRASOV REGION

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**Abstract:** *Tourism is a strategic economic activity in Brasov, its importance in the local and national economy being likely to grow in the next few years. Tourism is now one of the world's largest industries and one of its fastest growing economic sectors.*

*This paper is aimed at analysing the tendencies in tourism over the past five years in Brasov, observing the evolutions and suggesting some viable solutions for this region to become and remain a successful tourism destination in the future.*

*The measurement of tourism activity from the perspective of the consumption of visitors entails the estimation of the observation units – trip, visitor and travel party – and their corresponding characteristics. Tourism is a consumer of cultural and natural resources, direct and indirect services, being a source of services in turn. A significant part of the Brasov region abounds in natural and anthropic tourism resources, which makes it possible that an increasing flow of both national and international travellers should be drawn by tourism development, while new towns may appear and flourish as tourism resort.*

*In the case of Brasov region, the main reflection topic should be focused on the difference between the expected performance – the regional resources and the geographic position. As an absolute and also relative value in GDP, in the last few years, the Romanian tourism achieved performances which place it in the second half of the classifications related to Europe.*

*The contribution of tourism activity to the general economic development in Romania shows that tourism may act as in impetus for the global economic system. This implies the specific demand of technologies, goods, and services produced by various economic branches should be met.*

*Brasov area has a diversity of natural tourist resources and cultural assets of a great historical, architectural, and artistic value, those distinguish it from other areas. An accurate estimation of tourist potential elements requires a qualitative and quantitative system of criteria. Tourism favours the local utilization of several resources, of the labour market, for instance, contributing to its stabilization by diminishing the migration process towards the urban areas.*

**Keywords:** *tourism, system of indicators, accommodation, performance, analyse.*

**JEL Classification:** *M 10, M 20.*

**1. Introduction** Tourism is a service sector with a particularly complex product which depends on an extremely fragmented supply. Each link in the chain (hoteliers, travel agencies, tour operators, restaurateurs) offers one element in the overall product. Together, these components determine tourists' experiences and their appreciation of the quality of the service. (Tassiopoulos, 2008).

### **The industry and services in Brasov**

After the industrial decline in 1999, similar with the national tendency an industry relaunching happened in the year 2000. The industrial output has dropped in the last period due the following factors:

- The low capacity of adaptation to the modifications occurring in the structure of the home and foreign markets
- Strong undercapitalization due to inflation rise, sharp devaluation of the national currency, low investments volume, etc.
- Slow rate of privatization and restructuring
- Unsteady and incoherent legislative framework that did not stimulate foreign and home capital investment.

The construction sector is well represented at regional level. The industrial building sites have proven their experience in the framework of broad projects, by building dwellings, commercial centres, hospitals, education institutions, etc. A similar ambitious project was started in Brasov in 2011, called Airport Brasov.

In the field of services we can identify a decrease tendency that can be notices both at regional and national level in the recent period of time, with the mention that in the region the lowering rate has decreased from year to year. The weight of occupied population in services against region total is 29,60%, value that is extremely low when reported with the weight owned of this sector in UE regions.

This sector is characterized by:

- a strong concentration in the developed centres of the region, while in the rest of the territory it has a very low weight;
- Focusing on commerce and restaurant activities, and the services supplied directly to the population are insufficient and of poor quality.
- Tourism services that are not capitalized at the level of the existing potential;
- The advisory services that are insufficiently promoted;
- The health and social assistance services that are under the quality standards;

The activities concerned to ware and passenger transport have followed two baselines:

- Railway transport is still under state ownership and was subject to restructuring at the level of regional subsidiaries, to update the existing infrastructure;
- Road transport has particularly developed in the private sector, as ware and passenger transport companies were established and organized in an up-to-date and efficient manner.

Taking into account that tourism activity influences the use of the labor force from other sectors of the economy such as agriculture, food industry, light industry, construction, and that each job in the tourism generates one to three indirect and induced jobs, it highlights the need to develop stronger tourism activity in Romania and increasing its role in the national economy (Mihalache, 2011).

### **2. The evolution of tourism in Brasov during 2007 - 2011**

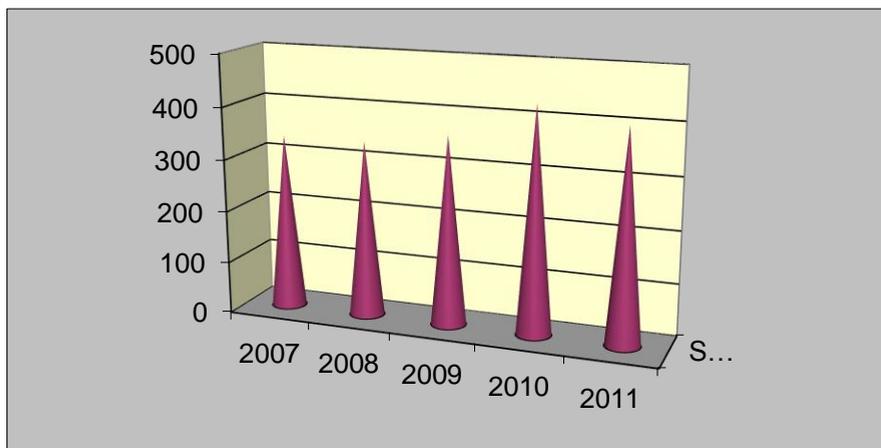
Brasov County is one of the counties with an enviable heritage and natural history, but that is not valued as it should be. Although the largest share of total tourist accommodation capacity in operation in the Romania, over the five years, has the Constanta County, Brasov County is following the share of total accommodation capacity in the country. Its advantage is that the accommodation capacity can be used in all seasons. It is interesting to follow the evolution of the accommodation

capacity and the number of tourist facilities, the types of units in order to determine a prognosis closer to reality as the development of tourism in Brasov.

**Table 1** Establishments of tourist reception with functions of tourists' accommodation

<b>Tourist accommodation structures</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Hotels and motels	42	37	42	47	55
Tourist chalets	27	24	19	21	13
Campgrounds	2	2	1	2	2
Villas and bungalows	60	59	52	64	67
Camps for students and preschool children	7	7	7	3	1
Urban guesthouses	84	87	119	82	107
Rural guesthouses	114	121	121	211	155
Holiday villages	1	1	1	1	2
<b>Total</b>	<b>337</b>	<b>338</b>	<b>362</b>	<b>431</b>	<b>403</b>

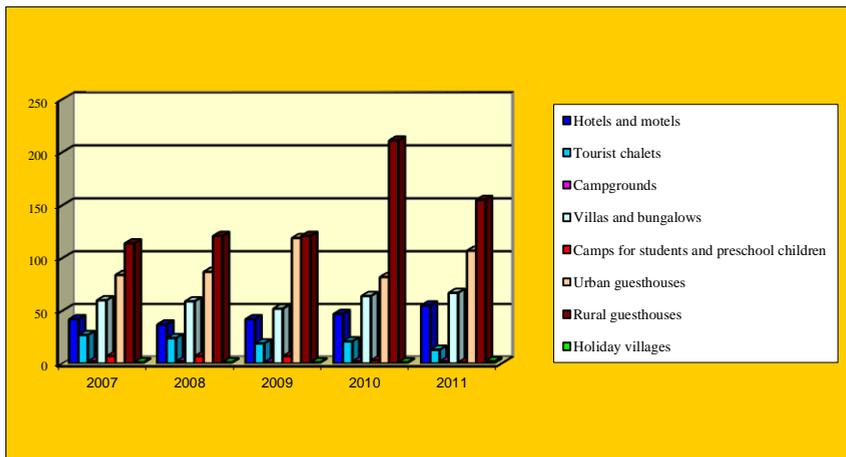
Source: National Institute of Statistics



**Figure 1** - Evolution of the total number of tourist accommodation – Made by the author

Source: National Institute of Statistics

It can be observed that in the years 2007 – 2011, in Brasov, the overall number of tourist accommodation structures with functions of accommodation had an increasing trend (with 66 units), their number decreased in the last year by 28 (403 in 2008 compared 431 in 2010). Were put into operation new hotels, motels, villas and bungalows, increased number of urban hostels, however, the number of guesthouses, after a steep increase from 114 in 2007 to 211 in 2010, in 2011 a decrease from 155 to 56 units. Also it is noted a decrease in the number of tourist chalets (from 27 in 2007 to 13 in 2011) and camps for students and preschoolers. However, increasing the capacity of accommodation in Brasov in 2011 compared to 2007 is approximately 20%.



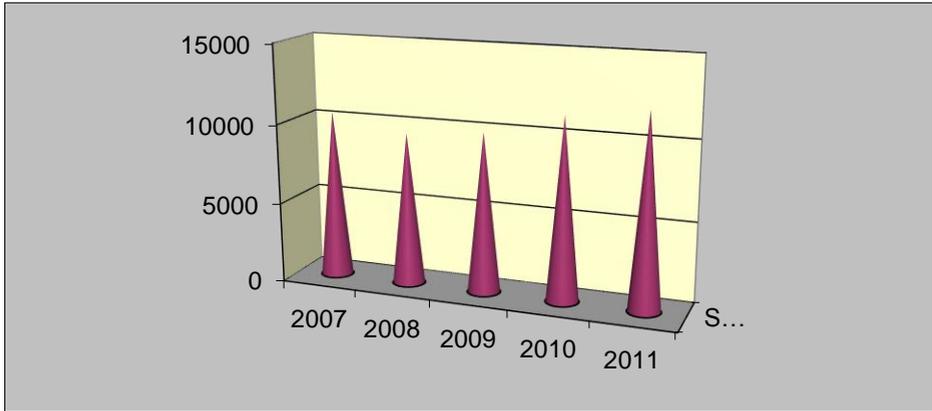
**Figure 2** - The evolution of the types of accommodation in Brasov, during 2007 – 2011 – Made by the author  
Source: National Institute of Statistics

Accommodation capacity has fared similar to the tourist reception structures, an increase of 14.5% in 2011 compared to 2007. There was a decrease during the period in 2008 when the number of accommodation decreased from 10.513 to 9.528 (a difference of 985), but the following year began to rise again, reaching a total of 12,037 in 2011.

**Table 2** - Evolution accommodation capacity in Brasov during 2007 – 2011

Year	2007	2008	2009	2010	2011
The accommodation capacity	10.513	9.528	10.007	11.380	12.037

Source: National Institute of Statistics



**Figure 3** - Trend of accommodation during 2007 – 2011 – Made by the author  
Source: National Institute of Statistics

It can be observed the same trend of growth and in terms of arrivals in tourist accommodation structures, with a decrease in 2008, followed by an increase in the next years. From 2008 to 2010 there is an increase in the number of arrivals by 45,5% and in 2011 came to 36,6% more tourists than in 2007.

**Table 3** – Arrivals in the establishments of tourists' reception with functions of accommodation

Year	2007	2008	2009	2010	2011
Number of persons	328.000	290.000	325.000	422.000	448.000

Source: National Institute of Statistics

**Table 4** - Number of overnight stays in the establishments with accommodation functions in Brasov during 2007 – 2011

Year	2007	2008	2009	2010	2011
Number of persons	885.000	779.000	823.000	961.000	1.000.000

Source: National Institute of Statistics

Number of overnight stays, according to statistics, in the period under review increased by 13%, had a period of decline in 2008, as the number of arrivals. Overall, the net use index of tourist accommodation capacity, determined as the ratio between the number of nights and number of places-days tourist capacity was in Brasov in the 2007 – 2011 lower than the national average (and so pretty lower) and lower than the average in the region VII Centre. This is a real warning to taking action for revival of tourism in Brasov.

**Table 5** – The net use index of accommodation places (%)

Year	2007	2008	2009	2010	2011
Brasov County	23,1	23,6	22,5	24,6	23,7

Source: National Institute of Statistics

The biggest tourist capacity utilization index in operation was recorded in 2010 (24,6%) compared to previous years (23,1% in 2007, 23,6% in 2008, 22,5% in 2009 and 23,7% in 2011).

### 3. The accommodation structures in Brasov

**Table 6** - Accommodation structures in Brasov

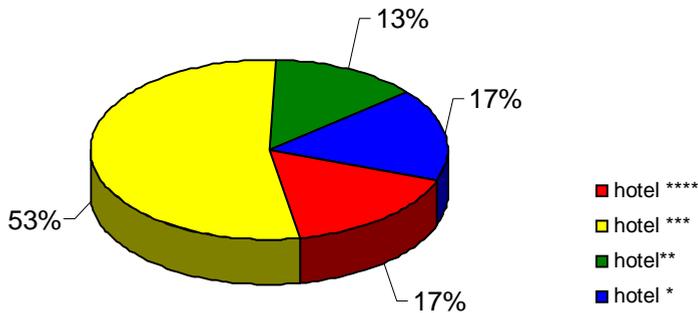
Hotel / Guest house	Classification	No. of rooms	Conference room	Restaurant	Price / double room (euro)
Aro Palace	****	117	200	x	140
Casa Cranța	****	8	-	x	60
Casa Țepeș	****	5	-	-	60
Curtea Brașov	****	14	20	-	55
Memo	****	6	-	x	60
Ambient	***	14	x	x	50
Ana Maria	***	7	20	-	45
Brașov	***	18	40	-	50
Capitol	***	183	-	x	48
Casa Mureșan	***	18	30	x	45
Flamingo	***	8	-	-	45
Montana	***	8	-	-	50
Kronstadt	***	14	-	x	50
Leo	***	12	-	x	48

Muri	***	10	15	x	40
Ned	***	42	-	x	45
Pompi	***	6	15	x	45
Simona	***	5	-	-	40
Sofie	***	18	30	x	40
Stejeriș	***	12	-	x	45
Warte	***	14	-	-	50
Ada Belle	**	14	30	x	30
Silvana	**	6	-	-	25
Coroana	**	76	-	x	40
Helis	**	20	-	x	50
Aro Sport	*	34	-	-	10
Postăvarul	*	63	-	x	20
Stadion	*	18	-	x	20
Tâmpa	*	43	-	x	25
Trifan	*	9	-	x	30

Made by the author

The analysis of the degree distribution of the stars we can see that classification most hotels in Brasov are classified with the 3 – star levels (53%). This reality actually pursues European tourism market trends and national default. Most hotels in major cities have a high three-star comfort, a trend that is reflected in the evolution expected for the next years. That kind of hotel has as tourist's model: businessmen, tourist groups, middle class families, etc.

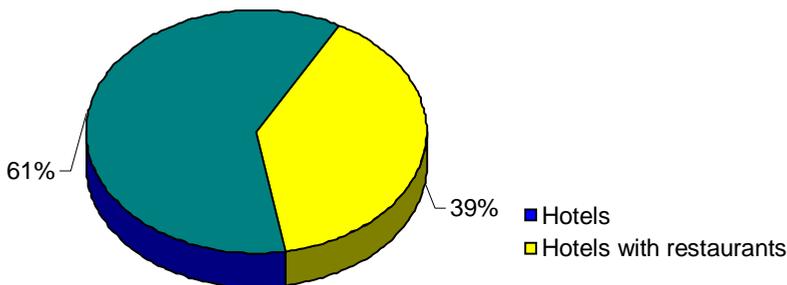
The distribution of hotels in Brasov



**Figure 4** – The distribution of hotels in Brasov – Made by the author  
Source: National Institute of Statistics

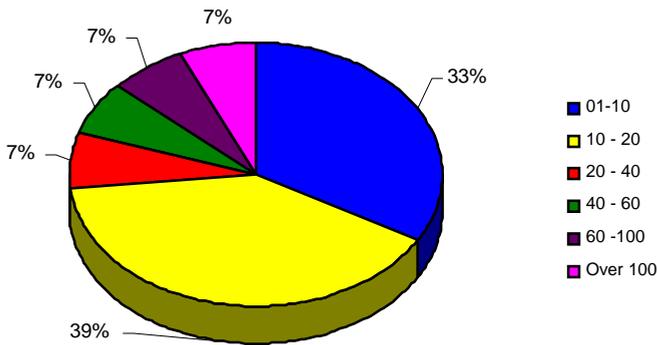
Regarding the distribution of the conference rooms in hotels, it can be notice that about a quarter of them have conference rooms equipped properly. The trend at the level of providers is to create such spaces considering that the business tourism is in full development. This form of action in tourism is becoming more profitable because of their high load hospitality, services ordered and consumed (conference rooms, catering, entertainment, etc.). In generally conference participants personally do not support the costs of accommodation and meals; those are paid by companies, who sometimes have impressive budgets for these events.

Analyzing the distribution of accommodation units that have their own restaurants, it is observed that about 40% of them have dining rooms. This is a normal situation, considering that many of the accommodation units have a limited number of rooms, which do not justify setting up catering facilities. Hotels with more than 20 rooms have catering facilities.

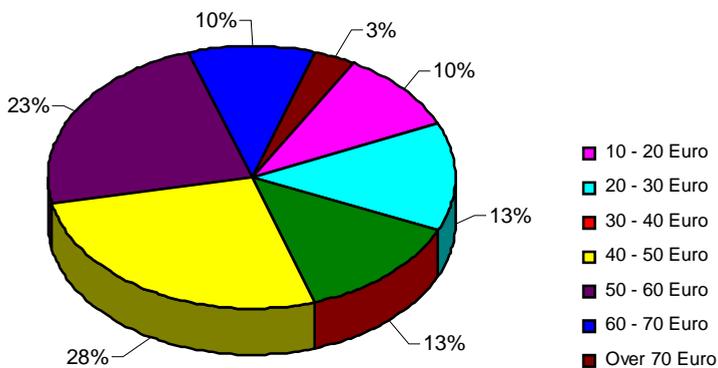


**Figure 5** - The distribution of hotels with restaurant/ hotels in Brasov – Made by the author  
Source: National Institute of Statistics

By analyzing the size the accommodation units of Brasov *are withdrawn* the following conclusions 33% of them are sized up to 10 rooms, 39% between 10 and 20 rooms. The rest are units with no more than 20 rooms. This shows that 72% of accommodation units in Brasov are small size, generally family hotels. Relatively low capacity of the accommodation is generally particularly high value of the investment in the hospitality industry. As a positive factor sizing to a small number of rooms allows for better adaptation to market requirements. Underdimensionnement for accommodation capacity creates inconvenience, especially in the case of larger groups.



**Figure 6** - Percentage representation of the size of the accommodation units in Brasov – Made by the author  
Source: National Institute of Statistics



**Figure 6** – Percentage representation of charges in hotels – Made by the author  
Source: National Institute of Statistics

Analysis applied tariffs at the reception show off those overall margin price 3-star establishments in the range of 40-60 Euro price / night for double room. This is an acceptable price by consumers being practiced within both national and European level.

#### **4. Conclusions**

Brasov tourism market is growing, so one could say the same about the types of tourism products, so investment in this area are welcome and can be effective. The tourist offer should be based on developing a marketing mix to be based on a correct segmentation of the target market; a complex product policy and adapted to expectations of potential customers; attractive pricing strategies, standard distribution policies and especially communication and promotion policy aimed at achieving direct feed-back communication with the target market. Prices / rates should take into account, on the one hand, the specificity and the financial interests of companies and, on the other hand, the strategies adopted by companies / travel agencies competing both directly and indirectly. It required a special approach market for individuals because it particularities both domestic and foreign markets, while improving market approach where the majority of business customers are more features. It is necessary to enhancement of the positive image that has the Brasov area, including the external market, while trying to create loyalty for the significant customers by using public relations techniques.

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# EFFECTS OF CUSTOMER ORIENTATION, LEARNING ORIENTATION AND INNOVATIVENESS ON HOTEL PERFORMANCE - EVIDENCE FROM CLUJ COUNTY

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**Abstract:** *This paper seeks to relate a strategy of diversification to innovativeness and to the performance of a hotel. Due to the more increased competition within the area of tourism e.g. hotel sector, the need of analyzing the variables mentioned in the title of the paper has become more and more obvious. The first part of the article regards the literature review for the three variables and thus, like an outcome four hypotheses are stated. The second part consists of developing findings for the studied region of Cluj County based on the presented research methodology. The results show that hotel performance is influenced by customer orientation and hotel innovativeness, while the latest one is associated in a positive manner with learning orientation. The three chosen variables could be considered real driven forces for competitiveness in the hotel sector. Thus, any management team should be aware of the results of this study and should create an appropriate environment within the organization able to sustain an expected performance level by focusing on the mentioned variables. Making a deeper analysis about the performance indicators, the results demonstrate the actual development stage of the hotel sector for Cluj County: above the national average, but with potential of growing, mainly from the perspective of efficiency. At this point, management should be aware about how significant could be innovativeness and learning orientation for creating or improving services and delivering processes. In the hotel sector it is very obvious that due to the increased role of employee the awareness is more valuable than in other sectors. Due to the most relevant market segment e.g. business tourism, the studied county is customer oriented and has a good mean value for sales goal achievement, also. In order to improve the profit goal achievement value, innovativeness and learning orientation have to be considered powerful instruments for management team. Taking into consideration the potential of growth in the Romanian hotel sector, we consider that the three chosen variables - customer orientation, learning orientation and innovativeness, should be further analyzed in respect with other performance indicators. Thus, we consider the study being valuable and relevant because it can be expanded not only to other regions - which gives it practical value, but also by including other performance indicators - for academic value.*

**Keywords:** hotel; customer orientation; learning orientation; innovativeness; performance; competitiveness

**JEL classification:** L83; L25; M10

## **1. Introduction**

In order to compete in this turbulent, unstable and globalized marketplace, hotel managers have to consider differentiation as a necessity. This differentiation can be understood in terms of innovative and/or personalized services, qualified human resources, brand, social responsibility, information and communication technology implementation or proactive managerial orientation towards customer, organizational learning or innovativeness. To sustain a competitive advantage, hospitality businesses have to exploit these opportunities.

Tajeddini (2010:221) suggests that hotels need to place customer orientation at the heart of the hotel's competitiveness. At the same time, Hult, Hurley and Knight (2004) say that a key component in the success of hotels is the extent of their innovativeness. Farrell (2000) suggests that once a hotel becomes customer-oriented, it begins to adopt and implement a learning orientation.

Consequently, the past few years have witnessed great interest in these constructs, their interrelationships and their implications on hotel performance, by scholars across marketing and management disciplines (Nasution et al., 2011; Tajeddini and Trueman, 2012; Leekpai and Jaroenwisan, 2013).

The article is structured as it follows. Firstly, a literature review on customer orientation, learning orientation and innovativeness provides a clear and accurate outline of these issues. This is followed by hypotheses statement. We then discuss the research methodology: sample, data collection and procedures. In the end, the results and discussion are presented followed by the conclusion of our study in terms of implications for hotel managers and academics.

## **2. Conceptual framework and research hypotheses**

### **2.1. Customer orientation**

Many studies provided evidence that being customer-oriented leads to obtaining a competitive advantage and high performance. In order to obtain these goals, hotel management have to consider customer orientation like a key element of current decision making process. Ruckert (1992:228) defines customer orientation as the degree to which the hotel obtains and uses information from customers, develops a strategy which will meet customer needs, and implements that strategy by being responsive to customers' needs and wants. Thus, a hotel should be able to answer and deeply analyze the following question: "What exactly do tourists want and value?". The first step a hotel must take to find the answer is to closely monitor its tourists. A large number of studies have focused on Front-Office employees from hotels (Tajeddini, 2010:222) like a primary resource through which hotels can gain a competitive advantage. For a better respond to this challenge, we consider that employees should have the following characteristics: ability to clearly identify and focus on relevant information and objectives, to develop appropriate and/or new solutions to certain types of problems, active listening and interacting with tourists, task orientation, responsibility, feedback oriented, organizational commitment and flexibility. Developing a sufficient understanding of tourists in order to deliver attractive, personalized and competitive hotel services is not enough. Hotel management must understand that, tourists' needs, expectations and perceptions of services' benefits change over time. Therefore, hotel management has to

systematically and continuously adjust the hotel offerings in order to deliver a memorable experience, not a simple hotel service.

Thus, the customer orientation is considered an important tool for achieving high performance in hotels, whether customer orientation is viewed from the perspective of product or service delivery (Tajeddini, 2010:222). Hence:

**H1:** Customer orientation is positively associated with hotel performance measured by: (a) profit goal achievement; (b) sales goal achievement; (c) occupancy rate.

## **2.2. Innovativeness**

Distinctions have been drawn among the concepts of innovation and innovativeness. In our initiative to pursue the concept of innovation in hotels we concluded that there is no precise definition, no consensus on its meaning, resulting in many interpretations. Moreover, this area is not enough researched (Peters and Pikkemaat, 2005, Rodgers, 2007), which prompted Ottenbacher and Gnoth (2005:206) to state that because of this deficiency, hotels managers use "intuition, assumption and experience" when trying to achieve innovation. Even though innovation and innovativeness in the academic research are not yet thorough, in practice they have evolved a lot (Hjalager 2010:1) due to their benefits.

In an attempt to define innovation in hotels, we appreciate that this is the process by which new services are obtained or enhanced current services or delivery processes, with positive effects on hotel performance and tourists' satisfaction. Also, we consider that related to the complexity of the hospitality sector, it is necessary to develop a definition of innovation in respect with the research objectives and the development level of the hotel sector from the analyzed region/country.

In order to understand the relationship between innovation and innovativeness, we mention this opinion: whereas innovation is typically an outcome-oriented measure, innovativeness captures the firm-level orientation toward innovation (Leekpai and Jaroenwisan, 2013:167 after Hurley and Hult, 1998). In other word, innovativeness represents the openness to new ideas as an aspect of a hotel's culture (Nasution et al., 2011 after Hurley and Hult, 1998), the initiation process of innovation (Hult, Snow and Kandemir, 2003).

Innovativeness has become an imperative for hotel's competitive advantage (Deshpande et al. 1993) and key determinant for hotel performance and survival (Van de Vrande et al., 2009). Thus:

**H2:** Hotel innovativeness is positively associated with hotel performance measured by: (a) profit goal achievement; (b) sales goal achievement; (c) occupancy rate.

## **2.3. Learning orientation**

Sinkula et al. (1997) conceptualize learning orientation as consisting of commitment to learning, shared vision and open-mindedness (Nasution et al., 2011:338 after Sinkula et al., 1997). Calantone et al. (2002) defines learning orientation as the activities of the organization to adding and using knowledge to enhance competitiveness. Furthermore, learning orientation is reflected in increased efforts by the employee to actively expand his or her existing repertoire of technical and social skills, thus learning new and better ways of interaction with customers (Hennig-Thurau and Thurau, 2004). Therefore, learning orientation is considered one of the most valuable resources, allowing hotels to address issues of

globalization and economic uncertainty. Many studies found that learning orientation has a direct and positive effect on organizational innovativeness (Hult et al., 2004). Thus:

**H3:** Learning orientation is positively associated with hotel innovativeness.

#### **2.4. Customer orientation, learning orientation and innovativeness**

We observe in literature that the relationship between customer orientation and innovativeness is a subject to debate. Some scholars show that customer orientation facilitates hotel innovativeness (Sandvik and Sandvik, 2003). Furthermore, Baker and Sinkula (1999) suggest that market orientation is necessary and sufficient in the creation of an optimal environment for innovation (Nasution et al., 2011:339 after Baker and Sinkula, 1999). Deshpande et al. (1993) suggest that, to understand the role and importance of customer orientation, the concept should be related to the innovativeness of an organization's culture. With regard to the relationship between learning orientation and innovativeness, Hurley and Hult (1998) suggest that learning orientations is one of innovativeness dimensions, which represent organizational cultural characteristics. These arguments and findings have led us to formulate the following hypothesis:

**H4:** Customer orientation and learning orientation are positively associated with hotel innovativeness.

### **3. Research methodology**

The samples in this study were hotel managers. In order to achieve our objectives, all classified hotels from Cluj County (one of the most developed counties from Romania) were included. The research method used in this study was the survey through a self assisted Web questionnaire. There were validated 35 questionnaires, resulting in the response rate of 66.04%.

The questionnaire was designed to ask hotel managers for their opinions on the following variables: customer orientations (9 items), learning orientation (7 items) and innovativeness (9 items). This information was collected using a five-point Likert scale (1-strongly disagree to 5-strongly agree) in response to statements about mentioned variables. The second part of questionnaire deals with the assessment of 3 performance indicators, namely profit goal achievement, sales goal achievement and occupancy rate. Each respondent was asked to evaluate performance in relation to primary competitors, using a five-point Likert scale (from 1= "worse than", to 5= "better than" the other company. This approach is used in many research papers (Hooley et al., 2000; Kirca, Jayachandran and Bearden, 2005; Tajeddini and Trueman, 2012). The last part of the questionnaire contains factual questions that capture respondents' demographic characteristics as well as their organizational characteristics.

### **4. Results and discussions**

The adequacy of the measurement model was assessed through examining construct reliabilities. As the coefficient alphas of all constructs exceed the 0.70 level recommended by Nunnally (1978), the reliability of the measurements is achieved. In fact, the coefficient alphas for customer orientation, learning orientation and innovativeness are 0.82, 0.86, and 0.77, respectively (Table 1).

**Table 1:** Cronbach's coefficient alpha

Variable	Number of items	$\alpha$
Customer orientation	11	0.82
Learning orientation	5	0.86
Innovativeness	11	0.77

Source: Authors' calculations

Results concerning the research samples revealed that the first three market segments targeted by hotels are: business tourists, with a percentage of 26%, transit tourists, with a percentage of 22% and leisure tourists, with a percentage of 18%.

If we analyze the three variables that influence performance, we observe in Table 2 that studied hotels in Cluj County have a high level of customer orientation (Mean=3.98) and medium levels of learning orientation (Mean=3.41) and innovativeness (Mean=3.39).

On the other hand, the performance indicators reveal the best mean value for occupancy rate (Mean=3.42), while the lowest one is for profit goal achievement (Mean=2.28). Cluj County is characterized by an intensive tourism flow due to the representative market segment-business tourists. As a result, the mean value for sales goal achievement is an appropriate one. This is not the case for profit goal achievement because of the low efficiency of the internal operations within the studied hotels.

**Table 2:** Correlations among variables, and shared of measures (N=35)

Variable	Mean	Standard deviation	1	2	3	4	5	6
1.Customer orientation	3.98	0.715	<b>1.00</b>					
2.Learning orientation	3.41	0.681	0.77	<b>1.00</b>				
3.Innovativeness	3.39	0.837	0.88	0.82	<b>1.00</b>			
4.Sales goal achievement	3.17	0.821	0.71	0.43	0.92	<b>1.00</b>		
5.Profit goal achievement	2.28	1.152	0.61	0.42	0.72	0.84	<b>1.00</b>	
6.Occupancy rate	3.42	0.948	0.82	0.50	0.85	0.83	0.72	<b>1.00</b>

$p < 0.05$

Source: Authors' calculations

Also, in Table 2 we observe positive correlation coefficients between studied variables, suggesting that the relationships are in the same direction. The lowest correlation coefficient was between learning orientation and profit goal achievement (0.42), while the highest correlation coefficient was found in innovativeness and sales goal achievement (0.92).

As Table 3 shows, customer orientation in studied hotels has a positive and significant impact upon sales goal achievement ( $\beta=0.688$ ,  $p<0.01$ ) and profit goal

achievement ( $\beta=0.503$ ,  $p<0.01$ ) providing support for H1. Similarly, innovativeness has a significant and positive impact upon occupancy rate ( $\beta=0.723$ ,  $p<0.01$ ) supporting H2.

**Table 3:** Hypothesis testing of H1–H2 standardized parameter estimation.

Variables	Sales goal achievement		Profit goal achievement		Occupancy rate	
	Beta	t-value	Beta	t-value	Beta	t-value
Customer orientation	0.688	1.420	0.503	1.890	0.535	2.778
Learning orientation	0.243	2.161	0.061	1.199	0.215	1.092
Innovativeness	0.638	1.796	0.325	2.395	0.723	1.039

$p < 0.05$

Source: Authors' calculations

Moreover, the study found that the interaction of customer orientation and learning orientation is positively related to innovativeness ( $\beta=0.854$ ,  $p<0.01$ ) leading to the acceptance of hypothesis 4, and learning orientation has a significant impact on innovativeness ( $\beta=0.817$ ,  $p<0.01$ ) providing support for H3.

## 5. Conclusions

The main goal of this study was to develop a more complex research in which to determine the extent to which each different variable could positively influence the hotel performance. In this particular paper were selected the three variables customer orientation, learning orientation and innovativeness based on the literature review and considered significant by the previous analysis.

Customer orientation is a primary variable and the most studied one when referring to its correlation with the performance of the company. If we consider the hotel sector, there are not so many studies with the above mentioned subject and we appreciate this one like a good start for the Romanian hotel sector. If we look at the Beta estimations for this variable, there are definitely the best values. We appreciate it like an expected situation because among the three selected variables this is the most available way for managers in order to improve their performances. Also, the more intensive correlation with sales goal achievement supports the same idea, while the profit goal is in the opposite situation. Managers could analyze the results of the study and to improve the internal aspects of the hotel business in order to get a more intense correlation. It means more focus on process innovation. This can be achieved by sustaining the other two variables.

Innovativeness has the highest value from all the correlation (0,723 – occupancy rate) which leads us to the idea that in the studied county, the managers are already concerned with developing adequate organizational culture for sustaining the innovation processes. We consider this process being in an early stage because it has not yet revealed the possible favourable influence on the other two factors. The management should have a proactive approach in respect with innovativeness and to push it to the other employees. Every employee should be aware about his/her role within the process delivery and to be encouraged to have a proactive attitude in every assigned task.

Learning orientation has the lowest values when referring to the estimated correlations. We believe that a flexible management attitude toward the directions already mentioned will enable to get more intense correlations with the performance.

We appreciate that the hotel organization of the 21<sup>st</sup> century would be more able to improve its performances if managers will have a better approach to the three studied variables and thus, the traditional trade-off between short term – financial performances and long term approach – competitiveness ones are no longer so valuable.

## **6. Limits of the study and future directions**

The three chosen variables are significant but the study could be more developed by adding new relevant variables. Also, the performance indicators could be extended by adding other financial or even nonfinancial ones for the future studies. We consider both the two possible extensions of the initial study like having a potential academic value.

Another perspective is to extend the geographical area of the research by comparison between the initial area and another one, already selected- Braşov County or to develop a national study where considering the most important touristic areas within Romania. This approach could have a significant importance for practitioners or managers within the studied areas.

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# CONSUMERS' PERCEPTION ON INNOVATION IN THE TOURISM VALUE CHAIN

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## **Abstract:**

*In the current economic environment, innovation is considered critical by the majority of tourism companies that are increasingly willing to spend more to become more innovative. This tendency is visible in all segments of the tourism value chain: accommodation services, transportation, intermediaries – travel agencies and tour-operators – as well as entertainment and leisure facilities. The final aim of innovation in tourism enterprises is to increase customer satisfaction and thus secure the enterprises' competitive advantage on a continuously changing market. Thus, consumers' perception on innovation is relevant not only to academics and researchers, but especially to organisations in the business environment, which use customer feedback in order to develop innovative products which are better suited to the individual needs of tourists. The purpose of this article is to determine how consumers of tourist services perceive innovation in the various segments of the tourism value chain. The results will indicate the perceived intensity with which innovation is implemented in the tourism industry as well as the sectors in which innovation could bring additional benefits to tourists. To this aim, it was conducted a literature review on the main types of innovations in hospitality, airline transportation and travel intermediaries, as well as a pilot questionnaire-based study on 120 regular consumers of tourist services. Results indicate a discrepancy between the importance tourists give to innovation and the actual perceived level of innovation in the tourism value chain. Furthermore, the research shows the importance of innovation in different segments of the tourism value chain in the purchase decision of a tourism product. Unfortunately, results indicate that Romanian tourism operators' perceived innovativeness is lower in comparison with foreign tourism operators. The study is exploratory, representing a starting point into a more comprehensive research into the means through which innovation can be enhanced in the various sectors of the tourism industry.*

**Keywords:** innovation; tourism; hotel industry; travel agencies; transportation; technology

**JEL classification:** L83; O14; M10

## **1. Introduction**

Tourism is an industry which is subject to a great variety of internal and external influences, being characterised by continuous transformation (Orilla-Sintes and Mattson) and generating new economic and social relations between people and

businesses. In order to maintain its competitive position, a company must strive to develop new products and services, new management instruments, new ways of organizing its function and structure and new means to communicate with partners and customers. Although a company's position is measured according to its revenue, profitability, market share and customer satisfaction, these elements cannot „point the way to the future” (Kim and Maubogne, 1997). Longterm success in the tourism industry greatly depends on an organisation's capacity to innovate and adapt to its changing environment. Innovation in particular is regarded one of the main determinants of competitiveness in tourism as it allows firms to achieve lower costs and higher quality outputs (Orfila Sintes and Mattson, 2009).

The study follows the rationale of Johannessen et al. (2001), which suggests that innovation in the tourism industry should be assessed by asking three questions – “What is new”, “How new is it” and “To whom is new”?. The current article aims to answer the first question – „What is new” – providing an overview of innovation in the various segments of the tourism value chain – accommodation, transportation and intermediates.

## **2. Innovation in tourism**

Innovation in tourism was largely neglected until the end of the 1990s, when mass tourism proved its incapacity to ensure the satisfaction of customer's changing needs and was replaced by what Poon defines as “new tourism”, a tourism focused more on the depth of the travel experience and the individual satisfaction of the tourist rather than on service standardisation (Poon, 1994, cited by Tigu and Rávar, 2012). The importance of innovation in tourism has increased ever since under the influence of both demand and supply factors. Thus, the increasingly complex needs of tourism consumers are continuously forcing tourism enterprises to “develop new products, services and experiences” (Pikkemaat and Peters, 2006). On the other side, new production factors such as information and communication technologies determined a profound change in the management of tourism enterprises. Several criteria may be used to classify innovations in the tourism industry. Based on its intensity, innovation may be classified as incremental and radical (Thorburn, 2004) or, according to Hjalager (2002) as regular, niche, revolutionary and architectural. Generally, incremental innovations consisting of continuous adjustments and improvements are regarded as typical to the tourism industry (Mointeiro and Sousa, 2011).

Based on the object dimension of innovation, a diverse typology has been put forward in the literature: product and service innovations, process innovations, management innovations, logistics innovations, institutional innovations (Hjalager, 2002), social innovations, human resource innovations, technological innovations (Pikkemaat and Peters, 2006). Other authors (Vila et al., 2011) also address market innovations, which include distribution channels, web-based communication, customer loyalty, information sharing and marketing innovations.

Innovations may also be classified based on the market they are addressed to. Executives appreciate as most important innovations leading to new offerings for existing customers, followed by new offerings that allow expansion into new customer groups. However, innovation leading to different changes in existing products and services also tends to become a priority (Andrew et al., 2010), together with innovations which make use of information and communication technologies (ICT) and which tackle environmental issues.

Since a tourism product encompasses a multitude of services, each provided by companies operating in different sectors – transportation, accommodation, leisure, and intermediation – the intensity and centrality of innovation also differs across the industry. In fact, tourism may be viewed as an integrated value chain of services (Bieger, 2001, cited by Pikkemaat and Peters, 2006), with different innovation patterns at each level of the value chain. Jong and Marsilli (2006, cited by Meneses and Teixeira, 2011) classify innovative small firms as

follows: the transport sector is “supplier-dominated” (as a consumer of technology externally developed by the manufacturing industry), while hotels and personal services are considered “resource-intensive” (a similar category to “supplier-dominated”, but with a higher degree of innovativeness). We will proceed to analyze the degree to which innovation is present in each of the main sectors of the tourism industry and, respectively, on each of the levels that make up the tourism value chain.

### **2.1. Innovation in the hotel industry**

In comparison to other industries, research and development expenses and the number of patents registered remain relatively low in the hotel industry (Pikkemaat and Peters, 2006). However, this does not mean that innovation is absent or scarce. In fact, it seems that most entrepreneurs in the hotel industry recognize the importance of innovation (Volo, 2004, cited by Pikkemaat and Peters, 2006).

Although the hotel industry is relatively homogenous, the innovation behaviour of enterprises varies considerably according to a multitude of factors. Innovation varies according to the size of the enterprises operating in the market, as the innovation capacity greatly depends on the organisation's size and this influences its ability to initiate research activities or to acquire and implement externally developed innovations (Hjalager, 2002; Orsila-Sintes and Mattson, 2007; Pikkemaat and Peters, 2006).

Although enterprises in the hotel industry are currently accustomed to a large variety of innovations, these innovations are generally developed by external suppliers and rarely developed internally (Pikkemaat and Peters, 2006). Some authors (Hjalager, 2002; Orfila-Sintes et al., 2005) define innovations in the hotel industry as being supplier-driven and not science based. This aspect is particularly valid in what regards ICT technologies (reservation systems, property management systems, new media applications). Other new innovative products include loyalty and environmentally sustainable programmes. As far as loyalty programmes are concerned, they are generally developed in integrated enterprises such as hotel chains, allowing customers to be accommodated in any establishment part of the chain at preferential tariffs. Process innovations are also frequent in the hotel industry, as property management systems are implemented in both individual as well as chain hotels in order to reduce costs and increase operational efficiency. A study conducted by Vila et al. (2011) indicates that market innovations and process innovations are among the most critical as they facilitate and regulate internal operations but most importantly relations with the hotel's customers.

### **2.2. Innovation in other sectors of the tourism value chain**

The expansion of Internet use had a visible impact in the tourism industry, significantly changing the way customers allocate knowledge about hotels, flights or even destinations (Grisseemann and Stokburger-Sauer, 2012). This impact is probably more visible in the travel agencies sector, considering the development of online travel agencies or online travel portals. Travel-related products are the largest category of goods sold on the Internet (Yu, 2008, cited by Castillo-Manzano and López-Valpuesta, 2010; Kim et al., 2007). In order to survive competition, traditional travel agencies must use the new technologies in order to not only create their own websites (Tsai et al, 2005; Yu, 2008, cited by Castillo-Manzano and López-Valpuesta, 2010), but also provide greater added value to the information and advice they offer clients (Alamdari, 2002; Cheyne et al., 2005, cited by Castillo-Manzano and López-Valpuesta, 2010). Moreover, travel agencies have to face a “re-intermediation process”, meaning they have to reassert their intermediary role by enhancing human interaction and consumer trust (Kracht and Wang, 2010, cited by Grisseemann and Stokburger-Sauer, 2012). Increasing co-creation activities enable travel agencies to provide travel arrangements tailored to each customer's individual needs (Grisseemann and Stokburger-Sauer, 2012).

In the airline industry, innovation is increasingly becoming a formula to regain profitability, along with massive cost cuts and mergers and acquisition activities (Franke, 2007). According to Franke (2007), innovation is induced through three main levers: new business models, advanced customer segmentation and new technologies. New technologies include new next generation aircraft such as regional jets (Brueckner and Pai, 2009), advanced information technology – wireless surveillance networks, integrated data bases and host systems - and new distribution systems, such as Amadeus, Sabre and Worldspan (Franke, 2007).

In particular, the airline industry has been deeply influenced by the expansion of Internet. The changes are very visible in the airline distribution sector (Alamdari and Mason, 2006, cited by Castillo-Manzano and López-Valpuesta, 2010), where companies started using websites for offering lower fares for price-sensitive customers (Muthitacharoen et al., 2006; Alamdari and Mason, 2006, cited by Castillo-Manzano and López-Valpuesta, 2010).

The expansion of Internet, however, has its disadvantages, as it increases competition by allowing customers to compare fares in order to select the best choice for them. The use of online travel services has become the most popular choice for purchasing travel tickets and other related conveniences, travel agencies being ranked last in customer usage (Kim et al., 2007).

### 3. Research methodology

Considering the fact that most studies focus mainly on innovation in the hotel sector, the aim of this research is to highlight the use of innovation in mostly all the firms of the tourism value chain. In order to analyse customers' perception on innovation in the tourism value chain, a pilot study was conducted on Romanian tourists. The research instrument was a questionnaire, specifically designed (in Romanian) and administrated to tourism services customers. The questionnaire was created using Google Docs and published online, the data being gathered via an Internet survey, conducted from March 24 to April 7, 2013. Approximately 400 persons received the invitation via e-mail to participate at the survey. During the 2 weeks dedicated to the study, participants were able to respond at any time to the online questionnaire by simply accessing the URL provided in the e-mail received. From the 400 persons involved in the study, 120 completed the questionnaire, resulting in a 30 percent response rate.

The first and the last 6 questions of the questionnaire were designed to obtain the respondent's demographic characteristics (Table 1). The other 7 questions (with a total of 33 items to be answered) were aimed to identify respondents' perception on innovation in different segments of the tourism value chain: hotels, travel agencies, transport, restaurants, entertainment. These questions were created with a 5-point Likert scale, measuring frequency of using different tourism services, innovation intensity and importance in the tourism value chain. As it can easily be observed in the demographic profile of the respondents (Table 1), age was measured using a categorical scale. More than 80% of the respondents are under 35 years old, while the gender distribution of the respondents is more balanced: 60% of them are female and 40% are male. Considering the distribution of respondents on age groups, the distribution based on the monthly income is not surprising: 65% of the respondents earn less than 2500 lei. The study focused on highly educated people (97% of the respondents have a bachelor or a master degree) who are (self) employed (55% of the respondents are working and 23% run a business).

**Table 1: Demographic profile of the respondents**

Variable	Percent	Variable	Percent
Age (years)		Education level	
18-24	33	High school	3
25-34	49	Bachelor's degree	33
35-44	9	Master's degree	64

45-54	5		
Over 55	4		
Gender		Occupation	
Female	60	Student/Master's student	20
Male	40	Employee	55
Monthly income (lei)		Manager/Entrepreneur	23
< 1000	22	Inactive	2
1000-1500	15		
1500-2000	12		
2000-2500	16		
> 2500	35		

The study has its limitations since different market segments have different travel experiences and are thus prone to make subjective judgements about specific services (Pikkemaat and Peters, 2006). Assessing the intensity of innovations at different levels of the tourism value chain should also include a research among providers from various branches which contribute to the creation of a holistic tourism product – accommodation, restaurants, transportation and entertainment.

#### 4. Results and discussion

The first question was designed to obtain the frequency with which respondents use to travel to tourist destinations from Romania and abroad. Responses show that 20 percent of tourists usually travel once a year, 62.5 percent – 2 to 3 times a year, 10 percent on a monthly basis, while 7.5 percent travel more than once a month. The result indicates that respondents are regular consumers of tourist services and therefore in a relevant position to make personal appreciations regarding innovation in the tourism industry.

The second question sought to determine the frequency with which tourists consume services provided by operators in the various segments of the tourism value chain: accommodation facilities, food and beverage, entertainment facilities, transport companies, travel agencies and tour-operators. The frequency was measured on a 5 level Likert scale: 1 „never”, 2 „occasionally”, 3 „medium frequent”, 4 „frequent” and 5 „always”. Results (Figure 1) show that the services provided by accommodation and dining facilities are frequently consumed by the vast majority of tourists, with a weighted average of 3,89 and 3,6 respectively, while the services provided by travel agencies and tour-operators are consumed occasionally. Transportation and entertainment services are consumed medium frequent.



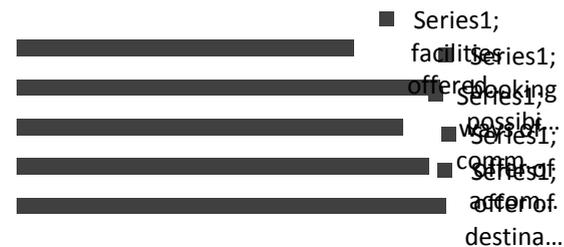
**Figure 1:** Tourism services – frequency of use and consumption

The purpose of the third question was to determine tourists' perception on the intensity of innovation in the different segments of the tourism value chain. Respondents' perception was also measured on a Likert scale from 1 "very low" to 5 "very high". According to the questionnaire results, the respondents perceive accommodation facilities as the most innovative in the tourism industry, with a weighted average of 3,63, while travel agencies are perceived as least innovative, with an average of only 2,28. Surprisingly, transport operators (2,91) are perceived as less innovative than food and beverage facilities (3,01), and entertainment facilities (3,4) although transportation is a capital-intensive sector which is in close connection with technology and ICT.



**Figure 2:** Perceived innovation intensity on various providers of tourism services

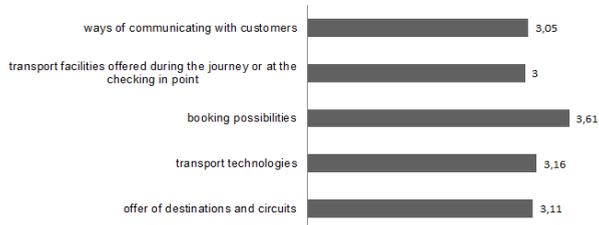
The fourth question was designed in order to determine tourists' perception on innovation intensity in travel agencies, organisations which act as intermediates between the final consumer and other providers of tourist services.



**Figure 3:** Perceived innovation intensity on travel agencies and tour operators

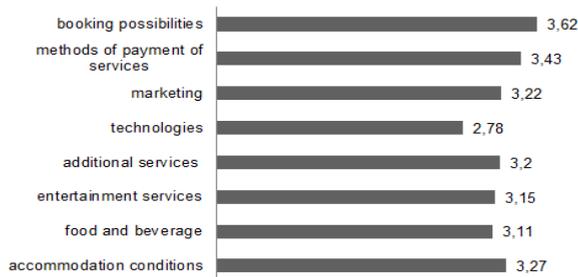
Results show that the reservation/booking possibilities are perceived as most innovative, with an average value of 3,26 on the Likert scale (from 1 "very low" to 5 "very high"), followed by the offer of destinations and circuits, with a weighted average of 3,31. Facilities offered at the agency's headquarters are perceived as least innovative (2,6), while the ways of communicating with customers (2,98) and the offer of accommodation and transportation

services (3,18) are perceived as medium innovative. The fifth question was aimed to identify the perceived innovation intensity (measured on a Likert scale from 1 “very low” to 5 “very high”) on different items concerning a specialized transport company activity (including airline companies).



**Figure 4:** Perceived innovation intensity on transport companies

As seen in Figure 4, according to the weighted averages computed for all the respondents (with values from 3 to 3,61), transport companies are perceived as medium innovative. The highest score was obtained for the booking possibilities (3,61), which indicates that customers consider that transport companies are highly innovative in this concern. The lowest score (3) was obtained for the transport facilities offered during the journey or at the checking in point, followed by the item concerning the ways of communicating with customers. Furthermore, respondents perceive transport technologies and the offer of destinations and circuits as only medium innovative. These results could have been influenced by the fact that the respondents do not have very high incomes and probably tend to choose low cost transport companies. The next question was aimed to highlight the perceived innovation in the hotel industry. Similarly to the previous questions, the respondents were asked to grade from 1 (“very low”) to 5 (“very high”) the innovation intensity in different aspects regarding a hotel’s activity.



**Figure 5:** Perceived innovation intensity in hotels

Unfortunately, the hotel industry is also perceived as only medium innovative, according to the weighted averages (with almost all values lower than 3,5) based on all the responses obtained in the survey. The highest score (3,62) was registered, similarly to the case of transport companies, for perceived innovation in booking possibilities, followed by the perceived innovation in methods of payment offered to clients. Accommodation conditions (e.g. great architecture, personalised rooms, new types of rooms) are also perceived as only medium innovative, closely followed in score by innovation in marketing (promotion ways utilised by hotels) and in additional services offered (e.g. spa, laundry, beauty salon). Entertainment services are, in turn, considered only medium innovative, similarly to the food and beverage services offered by hotels (weighted averages slightly higher than 3). The lowest score was registered for perceived innovation in utilised technologies (including “green technologies”), considered low to medium. As mentioned before, the results may have been influenced by the scale of accommodation units preferred by the questioned customers.

Furthermore, the research was aimed to identify the importance of innovation in different segments of the tourism value chain for choosing a vacation destination and for purchasing tourist services. Respondents were asked to award a grade from 1 (“not important at all”) to 5 (“very important”) for innovation importance in 5 sectors of the tourism industry: travel agencies, transport companies, accommodation units, restaurants and entertainment companies.



**Figure 6:** Importance of innovation in different segments of the tourism value chain in choosing a vacation destination and in purchasing tourist services

As it can be observed in Figure 6, according to the weighted averages computed based on all the customers questioned, innovation in accommodation units and in entertainment companies is important in choosing and purchasing tourist services (the weighted average, with a value of 4,08 in both cases, places these two value chain segments first in the top of most important sectors in tourism). Innovation in restaurants (weighted average of 3,94) is also important for the respondents, while innovation in transport companies is only medium important. The lowest weighted average was registered by the importance of innovation in travel agencies, which, according to the customers questioned, is medium important in purchasing tourist services. The last specific question of the survey intended to identify customers' perception on Romanian tourism operators' innovativeness, in comparison with foreign tourism operators. Results show that 81% of the respondents state that foreign tourism operators are more innovative than Romanian ones, while 12% believe that Romanian tourism operators innovativeness is relatively equal to the one of tourism operators from outside the country. Only 1% of the customers questioned believe that Romanian tourism companies innovate more than the ones outside, while 6% of the respondents were not able to make a comparison due to the fact that they had not travelled outside Romania. These results definitely conduct to further research ideas on innovation in tourism.

## 5. Conclusions

To conclude with, results show that the importance given by respondents to innovation in the various sectors of the tourism value chain is higher than their actual perception of innovation intensity in these sectors. Thus, although tourists feel that innovation in accommodation facilities, entertainment companies and restaurants are important to their decision to travel, they perceive these facilities as being medium innovative, which may signal an unsatisfied demand for innovation on the tourism market.

Furthermore, it is surprising that tourists view the food and beverage sector as more innovative than transport and intermediates and place a relatively high priority on the importance of innovation in restaurants. This indicates that although the literature on innovation in tourism is primarily focused on the hotel industry and transportation technologies, other segments such as dining and entertainment should not be ignored as they play a vital importance in the decision to travel.

Last but not least, although travel agencies and tour-operators have been described in the literature as open to innovation through the expansion of Internet and ICT, they seem to be perceived as little to medium innovative. Moreover, the importance of innovation intensity in travel agencies is regarded as lower than in the case of other sectors.

The results call for further research into the impact of innovation in the different sectors of the value chain on tourists' satisfaction and behaviour, as well as into the means through which innovation can be enhanced. A more comprehensive research based on this pilot study should also take into account the differences among providers operating in the same sector, since each of the industries playing a role in the tourism value chain – hospitality, food and beverage, intermediates, transportation and entertainment – are highly heterogeneous.

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# WHAT MOTIVATES CULTURAL TOURISTS? AN ANALYSIS OF BUCHAREST INHABITANTS' MOTIVATION TO VISIT THE CENTRE REGION

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**Abstract:** *Cultural tourism is currently one of the main driving forces of the tourist phenomena, accounting for a significant part of the world's tourist flows. Cultural tourism may take many forms, according to the motivation behind tourists' impetus to travel to a certain destination. Cultural heritage and historical sites, dance, music and theatre performances, art galleries, museums and exhibitions, religious and worship sites and ethnic traditions are the main attractions for tourists motivated by knowledge seeking, self-development and the desire to experience other cultures. Although cultural motivations play an important role in the generation of tourist flows towards cultural tourism destinations, a tourism experience is rarely generated as a result of a single motivation. The act of choosing a specific destination and tourism product is influenced by multiple motivations, not only cultural but also connected to relaxation or family. Furthermore, tourism products are rarely homogeneous – a single holiday may include experiences with cultural content as well as leisure time, sports, adventure or entertainment. Thus, culture is not always the main motivation behind cultural tourism and may in fact be less central to the decision to travel than other factors. This is particularly true in the case of destinations which dispose of various cultural assets, but whose natural tourist resources – such as landscape, climate, access to the sea – also makes them attractive for other types of tourism. The aim of this article is to show that in the case of tourist destinations where cultural attractions represent the vast majority of the areas' tourist heritage, cultural motivations remains central to the decision to travel. Furthermore, we will seek to identify the main types of cultural attractions that motivate cultural tourism in Romania by investigating Bucharest inhabitants' perception of the Centre Region, a cultural destination par excellence in light of the latest statistics and developments. The article is based on the findings of an exploratory survey-based research carried out in the first three months of 2013 on more than two hundred tourists and potential tourists in Bucharest.*

**Keywords:** cultural tourism; tourist motivation; Centre Region; cultural attractions; cultural destination

**JEL classification:** L83, M31, Z10

## **Introduction**

Among the forms of the „new tourism” defined by Auliana Poon (1994) is culture and heritage tourism, an industry which is both fast-growing as well as influential in what regards its capacity to change and improve life, knowledge and human relations.

Due to the fact that cultural tourism is often complementary to other forms of tourism, being practiced as a secondary activity, the nature and complexity of motivations influencing the travel decisions of cultural tourists still remains disputed among

scholars. Thus, apart from cultural motivations, the decision to travel to destinations disposing of cultural heritage assets also depends on factors associated with family, entertainment, relaxation and even business opportunities. However, cultural motivations – such as the desire to improve one’s knowledge, to discover and experience other cultures, to learn and develop – still remain important to cultural tourists.

### 1. Theoretical considerations on cultural tourism

Cultural tourism is currently „one of the most significant and fastest growing components of the tourist phenomena” (Alzua, O’Leary and Morrison, 1998). In fact, WTO estimates that cultural tourism currently accounts for almost 40 percent of all tourists trips worldwide (Isaac, 2008).

A study conducted at European level shows that 20 percent of tourists visiting Europe respond to cultural motivations, while 60 percent of travel flows in Europe include activities with cultural content (Nedea et al, 2011). In the former communist countries in Central and Eastern Europe in particular, cultural tourism has been regarded both as a new growth market as well as a means to produce, maintain and promote a favourable image of these countries (Hughes, Allen, 2005).

The terminology related to cultural tourism has been subject to confusion in the last decades (Hughes, 1996, Alzua, O’Leary and Morrison, 1998). According to Hughes (1996), cultural tourism includes „visits to historic buildings and sites, museums, art galleries and also to view contemporary paintings or sculpture or to attend the performing arts”.

The great variety of cultural attractions has lead to a classification of the many forms of this phenomenon. Thus, Hughes (1996) distinguishes between several forms of cultural tourism – **historical or heritage tourism**, which includes visits to historical sites, **arts tourism**, which refers to visits focused on museums, galleries and performing arts, and **ethnic tourism**, when the main motivation is to experience other cultures.

Regardless of the nature of the attractions which are subject to cultural tourism flows, culture and its forms of expression are generally considered the primary motivation behind cultural tourism. According to Lawrence (2008, cited by Ozel and Kozak, 2012), experiencing cultural assets is a major motivation in the decision to travel.

However, the centrality of culture as a motivation for travelling varies among consumers of tourism products (McKercher and du Cros, 2003). Opportunities for learning, cultural experiences and self-explorations are not always major motivations for cultural tourists (Hausman, 2007, cited by Ozel and Kozak, 2012).

Therefore, in an integrated tourism product, culture may be either a main motivation or a secondary activity, according to the structure of the destination’s heritage and the needs and interests of the tourist. Often, groups involved in cultural tourism also include people with little knowledge of the significance of the cultural asset that they visit (Hausman, 2007, cited by Ozel and Kozak, 2012).

In fact, a study conducted by Özel and Kozak (2012) shows that knowledge and experience – which are associated with cultural motivation – are rarely central for the decision to travel, being less important to tourists’ decision than rest, relaxation and experience. Still, the study has its limitations since it is conducted exclusively among Turkish tourists in the context in which Turkey is mostly regarded as a sun and sand destination, cultural motivations thus being secondary to leisure and relaxation. Thus, it would be possible for motivations to vary not only to the individual

profile of the tourists, but also according to the structure of a destination's heritage and particularly to the proportion of cultural attractions in the destination's overall heritage.

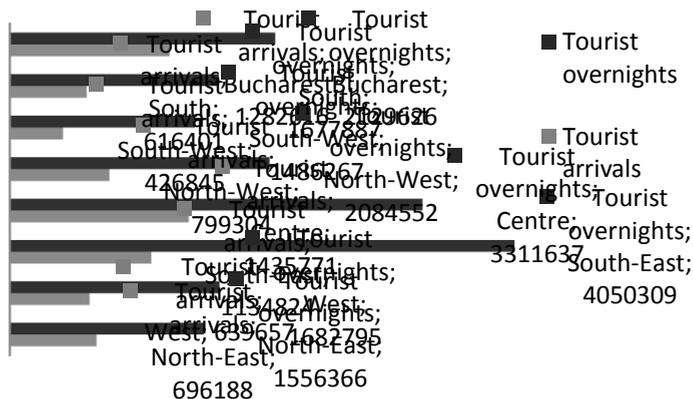
## **2. The Centre Region as a destination for cultural tourism**

The Centre Region is situated in central Romania, covering the vast majority of the historical province known as Transylvania. The region comprises 6 counties: Braşov, Sibiu, Alba, Covasna, Harghita and Mureş, which, over the course of the past eight centuries, have been home for various ethnic groups and communities – Romanian, Germans and Hungarians.

The multicultural character of the region has been reflected in the variety and multitude of cultural sites and attractions, which make up a rich and extremely valuable heritage, both material as well as intangible. These cultural attractions may be grouped in several categories:

- Medieval urban citadels, which are nowadays an integral component of many urban centres, such as Braşov, Sibiu, Sighişoara, Alba Iulia;
- Peasant fortresses - such as Feldioara, Rupea, Râşnov, Saschiz – and fortified churches, such as Prejmer, Biertan, Viscri or Călnic;
- Castles from various time periods, such as the Bran castle, the Bethlen Haller castle in Cetatea de Baltă (Braşov county), the Apafi Manor in Mălâncrav, the Bethlen castle in Cris (Mureş county), the Kalnoki castle in Micloşoara or the Arcuş Castle in Covasna county;
- Museums and exhibitions, such as the Astra Museum or Rural Civilisation in Dumbrava Sibiului, the Bruckenthal museum in Sibiu (Sibiu county), the National Unity Museum in Alba Iulia (Alba county);
- Religious edifices, such as the Şumuleu Monastery near Miercurea Ciuc (Harghita county), St. Stephen's cathedral and the Coronation Cathedral in Alba Iulia (Alba county), the Black Church in Braşov, the Brâncoveanu monastery in Sâmbăta de Sus (Braşov county)
- Rural areas which have maintained a rich intangible heritage, such as traditional dances, music, clothing, food and handicrafts; the region comprises several such ethnographic areas: Mărginimea Sibiului, the Bran-Moeciu-Rucăr corridor, Țara Făgăraşului, the Târnava Mare area etc.

According to the National Institute of Statistics, since 2010, the Centre Region has been the development region with the highest number of tourist arrivals – 1.13 million in 2010 and 1.44 million in 2011 respectively (Figure 1). Furthermore, together with Bucharest-Ilfov, the Centre Region has been the only development region registering an increase of the number of tourist arrivals in 2010 and 2011, thus recovering from the severe decline in the 2008-2009 period. In fact, since 2010, the Centre Region registered a higher number of tourist arrivals than Bucharest-Ilfov – the main destination for business tourism – and the South-East region, the only region with access to the seaside and where sun and sand tourism is possible in Romania.



**Figure 1:** Number of tourist arrivals and overnights in Romania, per development regions

Source: *The National Institute of Statistics, 2013*

Despite of the fact that the Centre Region comes second – after the South-East region – in what regards the number of over-nights spent in accommodation facilities this is however natural since stays in regions which are fit for leisure and sea-side tourism are generally longer than in the case of cultural tourism or business tourism destinations.

Although data regarding the proportion of cultural attractions in the Region’s tourist heritage are not yet available, there are several studies discussing the proportion of cultural tourism in the overall tourist flows in the Centre Region. For example, a study conducted by Dulău and Coroş (2009) indicates that approximately 50 percent of foreign tourists visit the region for cultural purposes and that cultural sites in the area are highly appreciated by visitors. In fact, Dulău and Coroş (2009) determined that foreign visitors’ favourite activities while travelling in Transilvania are visits to churches and monasteries, and visits to historic and archaeological sites respectively.

Thus, we may state that cultural assets do play an essential role in tourists’ decision to travel to the Centre Region, the area being considered the most representative cultural tourism destination in Romania, together with Bukovina (Dulău and Coroş, 2009).

### 3. An analysis of Bucharest inhabitants’ motivation to travel in the Centre Region

The statistical indicators published by the National Institute of Statistics (2013) show that the Centre Region was in the 2010–2011 period the development region with the highest number of tourist arrivals in Romania and the second highest number of overnights spent in accommodation facilities, being exceeded only by the South-East Region. These statistics indicate that tourists in general are highly interested in the Centre Region, both those coming from within the borders of Romania as well as foreign tourists. Taking this into consideration, the present study sought to identify the motivations of Bucharest inhabitants to visit, but most importantly, to practice cultural tourism in the Centre Region.

### 3.1. Methodology

To analyze the extent to which cultural motivations remain the main factor in the decision-making process of travelling in the Centre Region for those who live in Bucharest, we conducted an exploratory research based on a pilot study. To this aim we developed a 16 questions questionnaire, both multiple choice as well as open-ended questions, which were sent via e-mail to more than 500 Bucharest inhabitants. The questionnaire was posted online on Google Docs and was available for completion in the first quarter of 2013. The only criterion respondents needed to fulfil in order to fill in the questionnaire was to currently live and work in Bucharest.

The research is exploratory, as it represents only a starting point for further research into the motivations of Romanian cultural tourists. Limitations are imposed by the relatively small sample – approximately 200 cultural tourists - as well as by the fact that the research is restricted to tourists residing in Bucharest, with previous experience in cultural tourism activities in the Centre Region.

The observation unit is the tourist. The decision to analyze cultural tourist flows originating in the Bucharest Region is not arbitrary. The distance between Bucharest and the Centre Region can be easily covered by train or car in approximately 3 hours (on the routes Bucharest-Braşov and Bucharest-Sibiu), the region thus being relatively accessible to tourists in Bucharest.

At the time being, Bucharest is the largest cultural, industrial, commercial and academic centre in Romania. Bucharest is also Romania's capital and the largest city in the country in terms of both area and population, with approximately 1.67 inhabitants according to the Population and Housing Census in 2011 (National Institute of Statistics, 2013). Therefore 8.8% of the Romanian population lives in Bucharest.

Furthermore, statistics show that Bucharest-Ilfov is the only development region in Romania with a gross domestic product higher than the average GDP per capita at EU level (Adumitroaei, 2013). As cultural tourists are generally characterised as well-educated and earning an income above average (Busuioc, 2009), Bucharest may be regarded as one of the most important emission areas for cultural tourist flows.

The gross sample value was computed based on the formula  $n = \frac{t^2 * p * (1-p)}{\Delta w^2}$ , where n is the sample value, p is the ratio between the number of subjects possessing the studied characteristics and the total population, t is the coefficient corresponding to the guaranteed confidence probability, and  $\Delta w$  is the maximum accepted error level. The value of "p" is estimated based on studies in what regards the proportion of cultural tourists in the total number of tourists. A research conducted by Stăncioiu et. al (2011) shows that approximately 24 percent of Romanian tourists travelling to Transylvania practice cultural tourism. Thus, p will be considered equal to 0,24. The value of " $\Delta w$ " will be considered 5 percent (0,05) for a guaranteed confidence probability of 90 percent ( $t=1.645$ ). Based on these values, we concluded that, in order to be statistically relevant, our study must include at least 197,4 people.

The sample included 200 respondents, of which 36% men and 64% women. As far as age is concerned, 86% of respondents are 19-35 years old, 9% between 36-55 years and 4% over 55 years. In what regards the level of education, 11% finished high school, 40% have a university bachelor's degree, 45% a master's degree and 3% are PhDs.

### 3.2. Results and discussion

The first question was designed to obtain information regarding the frequency to which the respondent travels for cultural purposes in the Centre Region. Answers show that 20% of respondents travel visit the Centre Region approximately 2-3 times a year, 29% annually, and 26% less than once a year.

The second question was aimed at determining the main destinations that are chosen when traveling in the studied area. 43% of respondents travel predominantly to destinations in urban areas, but occasionally in rural areas, 19% choose only urban areas, while 8% only travel to rural areas. 17% of respondents travel to destinations which are situated both in rural as well as urban areas. Thus, it can be seen that respondents prefer urban destinations in the Centre Region, but do not ignore the rural destinations.

The third question refers to the importance of six factors – architecture and monuments (1), festivals and concerts (2), museums, galleries and exhibitions (3), local communities’ lifestyle (4), folklore and culinary traditions (5), other motives including leisure, entertainment, business tourism, visiting relatives and friends (6) - in the decision to practice cultural tourism in the Centre Region. To this aim we used a semantic differential five-level scale where 5=„very important” and 1=„not important” factor. Results were interpreted with the use of the Likert scale.

A weighted average was computed for each of the listed factors. As shown in Figure 2, the three main factors influencing the decision to travel in the Centre Region are, in order: architecture and monuments (4,069), other motives (3,875) and cultural events (3,76). Factors related to customs, traditions and museums were considered neither important nor unimportant: folklore and culinary traditions (3,68), museums and exhibitions (3,63) and local communities’ lifestyle (3,53).

The responses show that while cultural motivations remain important, respondents also place great emphasis also on other forms of tourism in the area, such as mountain tourism, business tourism or visits to relatives and friends, which confirms once again that tourists prefer to blend several forms of tourism during a trip.



**Figure 2:** Importance of various factors in the decision to practice cultural tourism in the Centre Region

Source: Data compiled by the author based on research results

The answers to the question regarding the time of the year when tourists prefer to travel to the Centre Region show that July and August are the most popular months

for such journeys, this period being chosen by 50% of respondents, while 27% of respondents opted for the May-June period, 9% for September-November, 9% for December-January. Only 5% stated that they prefer the February-April period for travelling in the Centre Region. The fact that 77% of respondents prefer to travel in the Centre Region from May to August leads us to the idea that Bucharest inhabitants prefer the warm summer months to practice cultural tourism in the area, seasonality being relatively high.

With regard to the average length of stay, an overwhelming share of 64% devotes a weekend for this kind of journey, 33% prefer to stay from 3 days to a week in the Centre Region, while only 4% spend more than a week in cultural destinations.

The sixth question is open-ended and invites respondents to indicate 1 to 5 cultural destinations where they prefer to travel in the Centre Region. 141 of the respondents indicated Brasov, 125 - Sibiu, and 82 – Sighișoara. Bran-Moieciu received 43 responses, the Făgăraș area - 38, Alba Iulia – 29, and Târgu Mureș - 20 responses. A quarter of respondents stated that they had visited one or more villages with fortified churches. It can thus be seen that the most popular areas for tourists coming from Bucharest are rich in cultural heritage. However, they also allow tourists to practice other forms of tourism such as mountain tourism, business travel or visits to relatives and friends.

Question 7 was aimed to determine the most frequent activities conducted by tourists in the Centre Region. We interpreted responses by using a semantic differential scale with 5 levels, where “1=never”, “5=always”. The respondents were given a list of nine activities and 5 variants of answers: never, occasionally, relatively frequently, often and always.

A weighted average was computed for each of the following 9 activities – spending time in nature (1); visits to relatives and friends (2); interaction with local communities (3); cooking, painting, photography, traditional art classes (4); attending music, film and theatre performances (5); attending cultural events, including festivals (6); visits to museums, galleries and exhibitions (7); visits to places of worships such as churches and monasteries (8); visits to historical sites (9).



**Figure 3:** Frequency of different tourism activities practiced in the Centre Region  
Source: Data compiled by the author based on research results

As shown in Figure 3, the most frequent activities undertaken by respondents are, in order: visits to historical sites and vestiges (3.4) and to places of worship (3.04). A mean of 2.92 was obtained for visits to museums and spending time in nature. Cooking classes, photography, painting classes received the lowest score (1.65), which indicates that respondents place a lower importance on learning activities.

The answers to questions 3 and 7 show the importance given by tourists from Bucharest to visiting historical sites in the Centre Region. This is not surprising, however, as the Centre Region concentrates a significant percentage of Romania's cultural and historic heritage, including 8 UNESCO Heritage sites, Sighișoara and seven villages with fortified churches.

In what regards the travel preferences of respondents, results show that 66% of respondents prefer to be accommodated in guesthouses, 13% in the homes of relatives or friends, 12% at hotels, 8% in camping facilities, 2% in hostels, while only 1% choose the rental of an apartment. As far as transportation preferences are concerned 81% of respondents stated they prefer to travel by car, 16% by train, 2% by bus or minibus and only one respondent by plane.

Asked about who they are travelling with when visiting destinations in the Centre Region, 55% of respondents answered they prefer to travel accompanied by friends, 33% accompanied by family members, 9% prefer travelling in a large group and only 3% travelling alone.

The last two questions were designed to determine the person responsible for the decisions regarding the destination and travel plans. Results show that 98% of respondents prefer to organize their own leisure activities and only 2% use a travel agency for this purpose. 62% of those who completed the survey stated that they are the ones who usually decide on the holiday destination and visited attractions, while 23% claim that the friends they are travelling with are responsible for this decision. 13% stated that their life partner decides on the destination, while 2% indicated that family members other than their life partner generally take this decision.

Regarding the average budget spent per day per person when travelling in the Centre Region, 47% of the respondents spend less than 100 lei, 44% spend between 101-300 lei, 7% spend between 301-700 lei per person and only 1% over 700 lei.

#### **4. Conclusions**

The purpose of this article was to analyze the importance of cultural factors in the decision to travel by studying Bucharest inhabitants' motivations to travel in the Centre Region, a region which occupies the south, eastern and central parts of Transylvania and is characterised by a highly diverse and rich cultural heritage. It also aimed to determine the main types of cultural attractions that motivate cultural tourism in the Centre Region and to assess the extent to which cultural tourism is complimentary to other forms of tourism, such as mountain tourism and business tourism.

The exploratory research revealed that architecture and monuments are considered more important in the decision to travel than the opportunity to spend time in nature or visit friends and relatives. Furthermore, local folklore and culinary traditions, festivals cultural events and visits to museums were indicated as relatively important by most respondents.

Thus, our analysis indicates that cultural motivations remain central to Bucharest inhabitants' decision to travel to the Centre Region and that cultural assets such as historical sites, places of worship and museums exert the highest attraction to tourists from Bucharest.

It seems however that other types of tourism such as mountain tourism, business tourism or visiting relatives and friends are also of great interest to tourists travelling in the area. This shows that culture and heritage are the main but not the only motivations for tourists travelling in the Centre Region. Furthermore, the study indicated that cultural tourism is often complimentary to other forms of tourism or part of a more comprehensive tourism product which can include both leisure as well as cultural activities.

The study has its limitations as it investigates tourist flows generated in one development region and oriented towards a single tourist destination, namely the Centre Region. Furthermore, the findings contradict other similar studies (Özel, Ç. H., Kozak, N., 2012) which show that cultural motivations play a secondary role in the decision to travel to a certain destinations. However, these studies were mostly conducted in areas in which natural resources such as landscape and climate play a more significant role in the generation of tourist flows than cultural factor and which are renowned as destinations for leisure tourism. In this context, we believe there is much need for more comprehensive research into the correlation between the centrality of cultural motivations and the structure of a destination's tourist heritage.

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**SECTION: FINANCE, BANKING, ACCOUNTING AND  
AUDIT**

***SUB-SECTION: PUBLIC FINANCES***



# THE CURRENT STATUS OF ACADEMIC EDUCATION FINANCING IN ROMANIA

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**Abstract:** *At the moment academic education is imperative for any society based on knowledge or which tends to it. Academic education can be treated as the "engine" of the society development as it contributes to the individual development of citizens and the development of the community as a whole. Therefore, the amounts for academic education should not be treated as burdensome expenses, but as true long-term investments for the community development. However, the Romanian academic education funding has always been a sore spot and a highly controversial topic of debate for members of the political class and civil society. For a long time it has been searching for the optimal solutions in university funding as an essential lever for shaping and sustaining a high quality education system. Over time, academic education has been funded from multiple sources: not only from public funds and financial resources from individuals or companies, but also from its own resources. Although efforts have always been made to sustain academic education from public funds, the recent research in higher education funding reveals a decrease of the amounts allocated by the state. The economic and financial crisis has clearly made its mark even on public funding of state universities. In this pessimistic context, in order to carry out their missions, universities have been forced to find new sources of funding. In this paper we propose, by a persuasive presentation from a theoretical perspective, to illustrate key aspects of current funding of academic education in Romania. In this purpose we will analyze the funding mechanism for state universities and private universities and we will try to provide answers for the following questions: To what extent could the current system of financing academic education in Romania be improved and what can we do to improve it? Could new sources of funding be identified as to support the educational process?*

**Keywords:** *academic education funding; basic funding; additional funding; complementary funding; own incomes; financial university autonomy.*

**JEL classification:** *H52; I22.*

## 1. Introduction

Academic education is particularly important in the development of any society because it creates long-term effects both in terms of human resources development and in the creation and dissemination of knowledge.

At the moment, in our country education is being considered and treated as a priority of national interest and its development is a public responsibility (Eurypedia, n.d.). Higher education is organized in state universities and in private universities. In

2012 in Romania were operating 57 state higher educational institutions and 51 private institutions of higher education accredited or provisionally authorized (CNFIS, 2013: 7).

For strengthening and upgrading the academic education, investments in higher education should be a priority for each state. Investments in academic education refer to *the process of financing higher education institutions*, namely all the ways in which universities get their resources and funds necessary to carry out the educational and research activities.

In time, higher education institutions from our country have been funded from public or private sources, but mostly from mixed or public-private funds. The adherence of Romania to the European Union has brought significant changes within each sphere of activity and implicitly in education. Regarding higher education, the rallying to the European Higher Education Area Standards was compulsory.

Universities funding, regardless of their type, is settled by the National Education Law (2011: 79). The current system of financing the Romanian higher education combines the traditional version in which the allocation is based on input (such as the number of students, number of ranking domains) with funding in relation to qualitative criteria such as excellence index, which depends on the class which are positioned in the hierarchy the curricula offered by each university. Higher education institutions enjoy *financial autonomy* in that the universities have the right to manage resources, but in compliance with applicable law.

## **2. Objectives**

Through this paper we intend to present an overview on Romanian academic education funding and to provide answers to the following research questions: To what extent could be improved the current system of financing academic education in Romania and what can we do to improve it? Could new sources of funding be identified as to support the educational process?

## **3. Methodology**

The research methodology that we used to develop this paper was not only the study of national legislation and specialized articles and studies, but also the study of reports and views issued by professional bodies regarding Romanian academic education and its financing. The scientific instruments used in elaborating this article were: data and information analysis, the synthesis, the interpretation and the deductive reasoning. Also, we used comparative analysis for comparing, in terms of financing, higher education institutions from public and private sector.

## **4. Financing public higher education institutions**

Analyzing the case of public institutions of higher education, the financing system represents the essential lever by which the government pursues its strategic objectives and ensures the implementation of national academic education policies. The academic education funding methodology is developed by the Ministry of National Education, in accordance with the methodological recommendations of the National Council of Higher Education (abbreviated CNFIS) as an advisory structure (CNFIS, n.d.). In turn, CNFIS is assisted by The Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), through the Directorate for Funding Higher Education (UEFISCDI, n.d.).

In terms of financing are mainly pursued the following objectives: the continued growth of the academic education quality, ensuring the efficient use of the allocated resources, respecting university autonomy, ensuring the compatibility with the European Area, ensuring equal opportunities for all citizens in academic preparation, satisfying the requirements of the labor market and of the society in general.

The annual budget of state universities consists of incomes from: budget financing and own incomes (extra budget incomes and incomes from other sources).

*Budgetary funding* of public institutions of higher education consists of amounts allocated from the Ministry of National Education and includes: institutional funding and complementary funding.

*Institutional funding* is allocated according to the institutional contract, signed annually for the current year between the Ministry of National Education as a financier, and each higher education institution, as beneficiary of funding. As can be seen in Figure 1, the institutional funding includes:

- *Basic funding* which is allocated on the three cycles of higher education (Bachelor's, Master's and Doctorate), depending on the number of unitary equivalent students and on the number of doctoral grants. This source of funding is multiannual in that it is provided throughout the entire cycle of study (Bachelor's, Master's and Doctorate). Basic funding is granted to cover the main categories of expenses related to teaching such as: personnel costs (not only wages of teachers, auxiliary teaching staff and research staff and related contributions, but also internal or external displacements), material costs (maintenance costs, costs for materials, for inventory, for functional services, for current repairs, books and publications, labour protection, staff training, protocol, etc.) and overheads (*The Methodology of Budgetary Allocation for Basic Funding and Additional Funding for Public Higher Education Institutions in Romania*, 2012: 1).

In order to determine the allocation for basic funding for each university, it is necessary to establish firstly the financing per student. Therefor, taking into account the above-mentioned allocation methodology, the next steps are followed: firstly, we determine the number of equivalent students for each hierarchy domain of an university; secondly, we determine the number of unitary equivalent students for each university; thirdly, we determine the total number of unitary equivalent students (overall universities funded); fourthly, we determine the allocation (financing) per unitary equivalent student as follows:

$$fb_s = \frac{FB}{SEU}, \text{ where}$$

$fb_s$  = the allocation per unitary equivalent student;

FB = the allocation for basic funding;

SEU = total number of unitary equivalent students.

At this point, we can determine the basic funding allocation for each university, as follows:

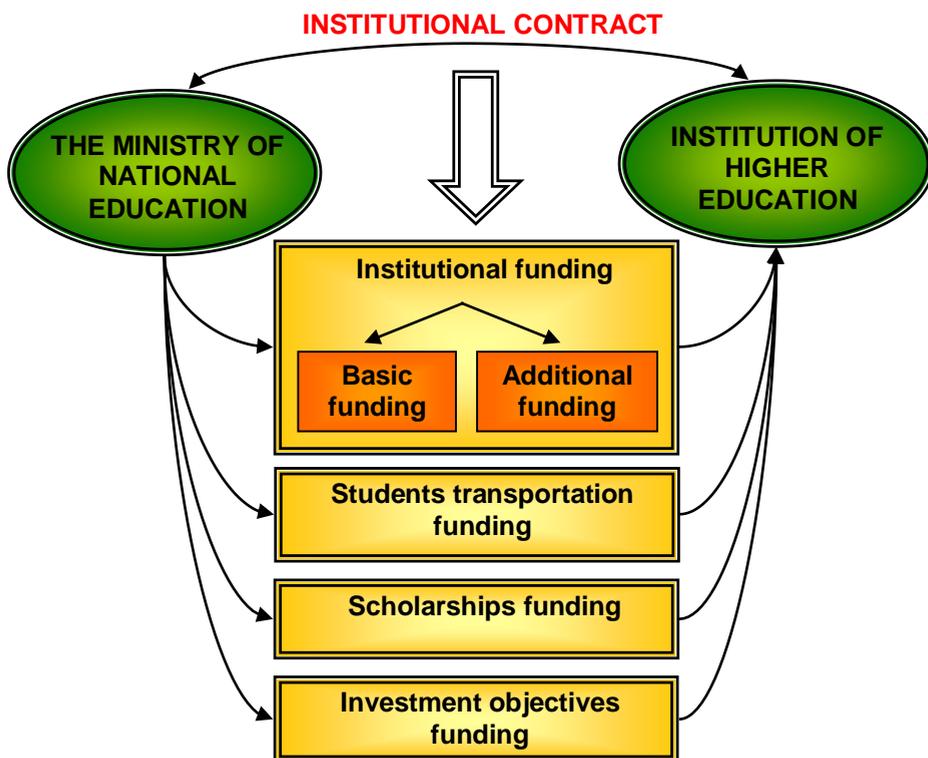
$$fb_U = fb_s \times SEU^U, \text{ where}$$

$fb_U$  = the basic funding allocation for the university U;

$fb_s$  = the allocation per unitary equivalent student;

$SEU^U$  = the number of unitary equivalent students of the university U.

- *Additional funding* which is allocated to stimulate the excellence of the universities and the study programs within them, depending on the fulfillment of the quality criteria and standards established by The National Council for Financing Higher Education. At national level, additional funding is allocated in quantum of at least 30% of the amount allocated as basic funding for public higher education institutions.
- *Scholarships and other forms of social protection funding* such as: scholarships for Romanian students and PhD, scholarships for students who live in rural areas, merit scholarships for international Olympians, scholarships for foreign students and PhD scholars of the Romanian state.
- *Students transportation funding* allocated according to the number of unitary equivalent students - full time students, on funded places.
- *Investment objectives funding.*

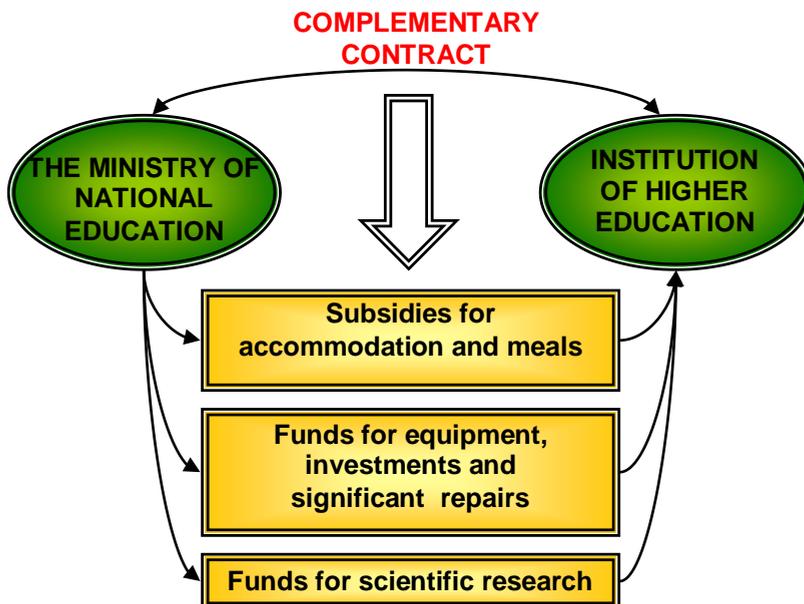


**Figure 1:** The scheme of institutional funding for public institutions of higher education

Source: Own processing of the National Education Law

By analogy, *complementary funding* is also allocated according to a contract, but this is the case of a complementary one, signed simultaneously with the institutional contract, between the Ministry of National Education as a financier, and each higher education institution, as the beneficiary of funding. Complementary funding is allocated for covering the overhead expenses of the teaching process, as can be seen in Figure 2, and it can take the form of: subsidies for accommodation and

meals, funds for equipment and other expenditures for investments and significant repairs, funds for scientific research.



**Figure 2:** The scheme of complementary funding for public institutions of higher education

Source: Own processing of the National Education Law

In fact, universities sign the institutional and the complementary contract early in the first quarter (usually in March) for the current year and then at the end of the year (in December) the renegotiated contracts will be signed.

Concerning the two previously mentioned funding sources (institutional funding and complementary funding), the National Education Law expressly stipulates the fact that by the agreement signed with the Ministry of National Education, *rectors of state universities are responsible for allocating the resources with priority to the most performant academic structures.*

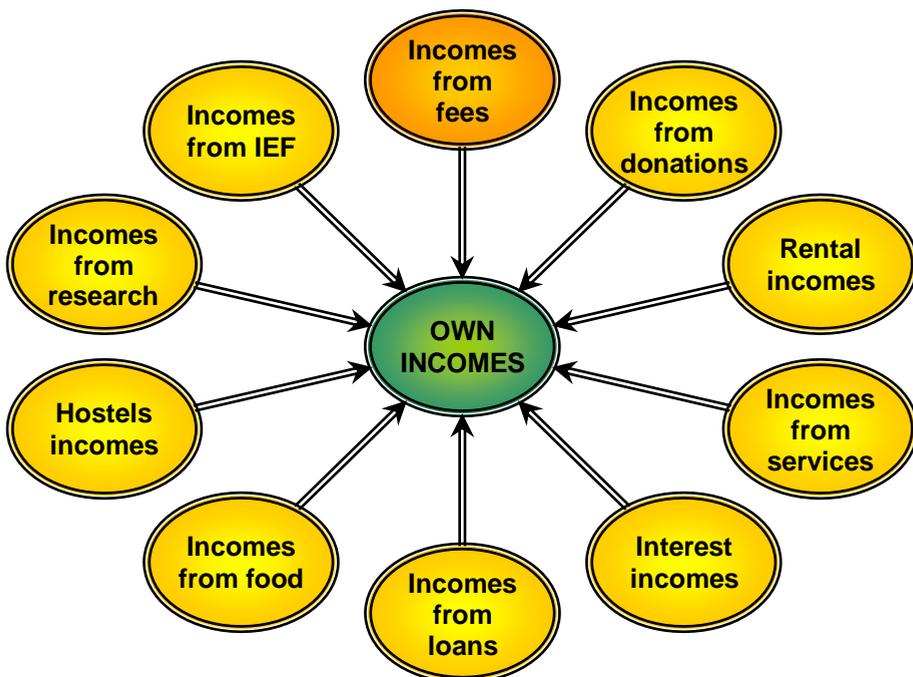
However, for Romanian universities, obtaining the necessary funds to carry out their activities has become a matter of financial management, aiming to identify the most efficient methods of using these resources. The autonomy of the universities in financial management has increased, especially regarding the collection and use of *own revenues*. Public institutions of higher education can obtain their own revenues from multiple sources.

The most important source of own revenues is represented by *the tuition fees* collected by the universities from the students who aren't funded by the Romanian state. Also, state universities may collect fees not only for admissions, registrations, exceeding the tuition time established by the law, re-examinations and backlogs, but also for other activities not included in the curriculum. The amount for the tuition fees is approved by the Senate of each university depending on the faculties proposals.

Schneider and Cosma (*The Current System of Financing Public Higher Education in Romania*, 2011:393) identifies also other financing sources from private funds, such as: donations and sponsorships, amounts obtained by renting properties, amounts obtained from services (various courses, organising different events, consultancy services), interest income, amounts obtained from loans or overdrafts. In the category of own revenues we can also find *the irredeemable external funds* which can be classified according to their origin in: amounts received from the European Union (through European Regional Development Fund and European Social Fund) and amounts received from the state budget. In 2007-2013, academic education in our country has benefited from structural funds through three financing programs: POSDRU, POS CCE and Regio.

Another source of own revenues for universities are the *revenues from research contracts* signed between them and various private entities. Scientific research is an integral part of the mission of universities and aims to contribute to the overall development of higher education. The scientific research is based on: projects won in national competitions (research contracts excluding VAT) and projects financed by third parties (research contracts including VAT - business contracts).

State universities can also obtain financial resources not only from revenues in the form of taxes for accommodation in student hostels, but also from the canteens activity. The suggestive presentation of the main own sources of funding is shown in Figure 3.



**Figure 3:** The origin of own incomes of public institutions of higher education  
 Source: Own processing after the financial statements of the University of Craiova as a public institution of higher education

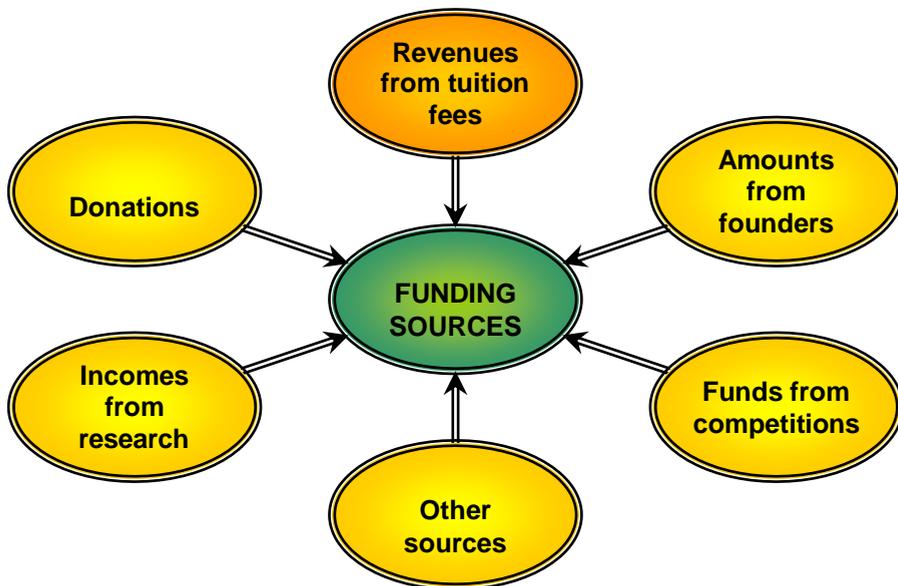
## 5. Financing private institutions of higher education

Concerning private institutions of higher education, firstly it should be noted that they operate as private legal persons and they are funded on the initiative and with the resources of a foundation, association or other education provider.

These institutions also benefit from university autonomy according to the National Education Law (2011: 82), but they also have economic and financial autonomy under private ownership.

The private universities may be financed from the following sources, as shown in Figure 4:

- revenues from tuition fees and other school fees;
- amounts from founders;
- national and abroad donations and sponsorships;
- funds obtained from competitions;
- amounts from exploitation of the results of research, innovation and development;
- other sources.



**Figure 4:** Funding sources for private and confessional institutions of higher education

Source: Own processing of the National Education Law

## 6. Conclusions:

The strengths of the current system of financing are mainly the following:

- it provides transparency in budgetary allocation for higher education institutions as a result of the existence of a clear methodology in allocation based on a formula uniformly applied;
- it supports university financial autonomy;
- it encourages an integrated management in universities, based on strategic management and careful planning;

- it efficiently stimulates the use of funds, giving priority to the most advanced structures that contribute to achieving the strategic objectives.

However, it would be too much to say that the current system of financing Romanian academic education is efficient. Certainly, we must admit that the National Law of Education significantly improved the current system of financing universities from our country in the attempt to rally on the principles recognized and adopted by most EU countries, but it is still far from being fully efficient.

The main problems which the current system of academic education funding is faced with are:

- the chronic underfunding. For the academic year 2012-2013 Romanian Government allocated for education only 3.43% of GDP. Insufficient public funds allocated for academic education hinder Romanian universities to become competitive at Community level, even worldwide, and undermines the quality of the system and the development of the Romanian society;
- the impossibility to compensate the reduction of state funding by increasing the number of students with fees;
- the annual budgetary allocation per student is extremely low and scholarships are insufficient to support and stimulate the desired performance;
- the increase of the VAT percentage and higher utility prices were not taken into account to increase the subsidy for hostels and canteens, but on the contrary these increases have led to higher taxes of accommodation in hostels, despite the fact that, in recent years, investments in student hostels and canteens have not achieved the standards.

Although the current system is functional, obviously there are necessary additional measures to improve and modernize it, especially in terms of finding new sources of funding.

Our proposals for optimizing financing Romanian academic education are:

- increasing the absolute level of funding by increasing the budget allocated for education as a percentage of gross domestic product (GDP);
- increasing resources efficiency by prioritizing funding lines to academic structures considered important (for example: investments in research, libraries modernization and last but not least investments in hostels and canteens rehabilitation);
- identifying new funding sources.

In order to improve the current system of funding academic education, we support, firstly, the combination of funding by input criteria with funding based on outputs, such as number of graduates (as a quantitative element) employed during the year under specialization that followed (as qualitative element). This performance indicator would highlight the ability of universities to teach capable and well prepared graduates. Universities whose graduates are unable to access the labour market according to their specialization should receive lower budgetary funds in the next academic year.

Secondly, as a new source of funding, we support legislating the participation of employers in academic education funding (Schneider and Cosma, 2011:395). The university should be rewarded, once for each graduate employed according to his specialization, with the equivalent of a minimum wage. This amount would be paid 50% by the employer and 50% by the recent graduate employee from his wage. The amount paid would not be a burden neither for the employer nor for employee

since it involves reducing the wage for one month and the payment would be made once in a lifetime. But, for every university, this contribution would be very significant because it allows the funding of other students and the orientation of accumulated surpluses to finance other investments in academic education. Introducing this demarche would have the effect of encouraging universities to improve the quality of education in order to receive the proper reward after hiring trained and qualified graduates.

Another proposal that we support is introducing funding through *the system of educational vouchers*, a proceeding that respects the basic principle of funding "the resources follow the students". This financing system consists in providing vouchers to students that will decide in which university they will study. The vouchers could be used in any accredited higher education institution. The problem in this case refers to choosing which students may benefit from these vouchers and setting the methodology of allocating the vouchers. At the moment, we believe that the baccalaureate is not a criterion by which it could fairly distribute these educational vouchers, even if it is organized nationally. Therefore, we believe that the transition to educational voucher system should first be made for master's and doctoral cycles because in these cases it could be taken into account the results obtained during university years.

Given all the above mentioned considerations, we believe that the current state of academic education funding in Romania still needs significant improvements to complete the improvements brought by the National Education Law, followed by orientation to support private higher education only after the public higher education reform will be stabilized.

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# BUDGET AND BUDGET EXECUTION IN THE NORTHWEST REGION OF ROMANIA

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**Abstract.** *The budget is a multiannual tool for financial forecasting both at micro and macro level. In this sense, regional and local government budget is a financial instrument that connects resources to use local funds in order to ensure the prosperity of the community concerned. Construction and especially budget execution highlights the effectiveness of local and regional government. Using a system of correlated indicators it reveals income, expenditure and budgetary outturn.*

**Keywords:** *budget, budget execution, cash flow, revenue collection level, primary deficit*

**JEL classification:** *H72*

## 1. Literature review on local government budget

The term budget with its multiple meanings is specified in the content of the public finance law. Thus, legal rules provide that the budget means the document that is provided and approved each year concerning revenue and expenditure or, where appropriate, only the costs, depending on the system of financing public institutions (\*Law no. 500/2002, on public finances, published in Official Gazette 597 of 08.13.2002).

Public financial resources are established and managed by a single system of budgets, namely the state budget, social insurance budget, local budgets, special funds budgets, state treasury budget and the budgets of other public institutions with autonomous character under the conditions to ensure budget balance.

The national budget is the main financial instrument of the state, which serves the size of financial resources to establish their destinations and to substantiate the financial balance over a given period, usually one year.

The main external influences that may affect the budget, are grouped in the following areas (Brookson, 1997, pp. 30-31): the economy (inflation, interest rates, taxes etc.). Population (type, number, mobility and future trends ) workforce (number, availability, demand, expectations), law (labor law, consumer protection, health,

safety), governments (types, fiscal and monetary policy, industrial policy, incentives, initiatives).

Some experts consider that the budget function reflects the monetary expression of the quantity of each public utility (Niskanen, 1976, pp. 617-643), while others believe that the budget constraint expresses that require voters about the usefulness of certain purchases or public works. (Moesen & Cauwenberge, pp. 207-224)

The budget is the most important act of public life, it is the financial expression of the state action program for the period of one year.

## 2. Method and results

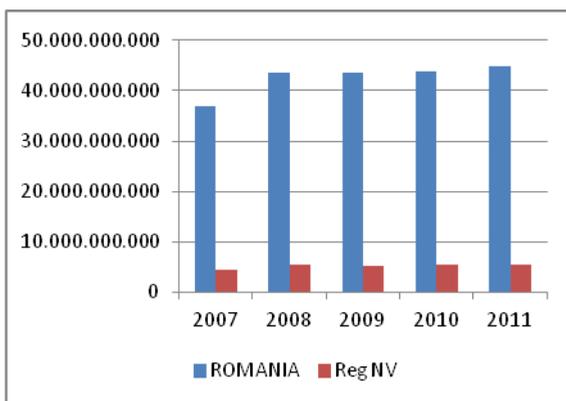
The regionalization of Romania, in terms of territory took place in 1998, when they founded 8 regions (North - East, South - East, South - Muntenia, South West, West, North West, Central, Bucharest Ilfov).

Like all developing regions, the North West has no administrative powers, its main functions are coordinating regional development projects and absorption of EU funds.

North West Development Region comprises 6 counties. In each county local authority structures are the County Councils, Local Councils, municipal, town and community.

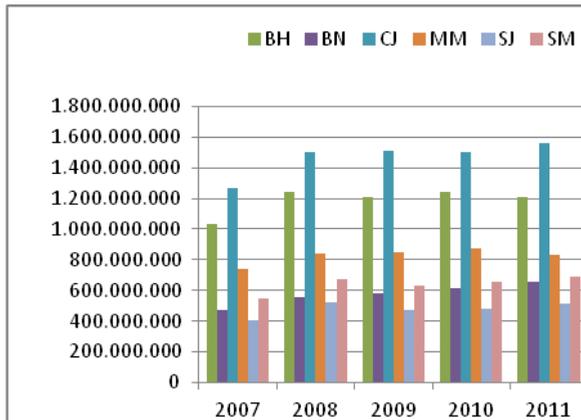
### 2.1. Analysis of the budget revenues in the northwest region

Indicators of income - are indicators that reflect a certain level of income and the extent to which local and regional government holds control over regional and local revenues.



**Graphic 1:** The evolution of total revenues in Romania and North-West region

Source: The budget and the financial statements of county administrations in the North-West region



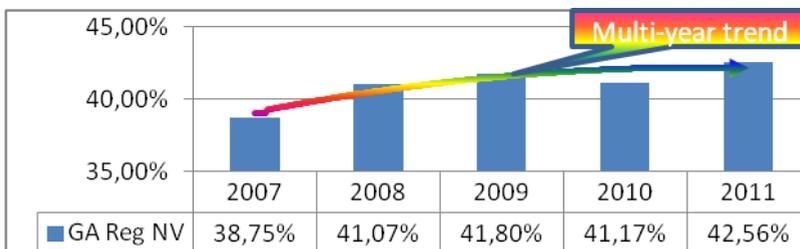
**Graphic 0:** The evolution of total income in the counties in the North-West region  
 Source: The budget and the financial statements of county administrations in the North-West region

The first indicator is the degree of self-financing of local government (GA), which represents the ability of local government to cover the total costs of revenues (tax and non-tax revenues for local government where authorities are responsible for establishing, monitoring, control and collection):

$$GA = \frac{CT}{VP} \times 100$$

where:

- CT represents the total expenditure;
- VP represents own income.



**Graphic 3:** Evolution of the self-financing in the North-West region  
 Source: The budget and the financial statements of county administrations in the North-West region

We consider that as this indicator is 100% a way for the self-financing local government projects is ensured. From the graphic notes above we observe that the funding needs of local governments is around 50% of own funds, the rest being used for investment resources.

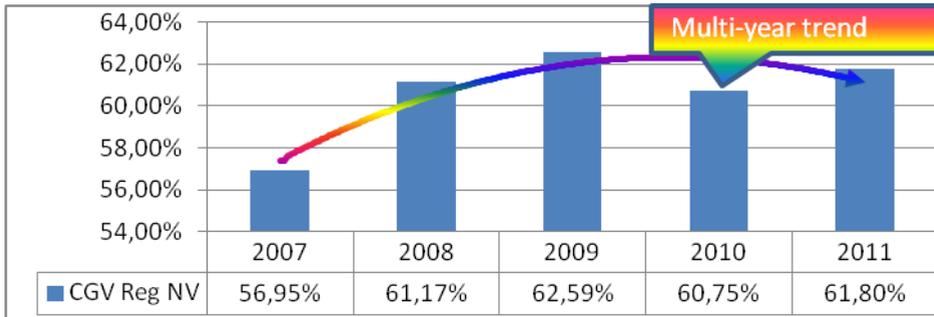
**Capacity of local authorities to generate revenue (CGV)** is another important indicator that can be defined as a share of own revenues (tax and non-tax revenues that are under the control of local authorities and rates of income tax collected in the

territorial administrative unit) - which reflects the development of local economy - the total budget revenue for local authorities.

$$CGV = \frac{VP + \text{shares IVG}}{TV} \times 100$$

where:

- VP + shares IVG represents own income and share of income tax collected in the territorial administrative unit;
- TV represents total income.



**Graphic 4:** The evolution of local government capacity to generate revenue in North-West region

Source: The budget and the financial statements of county administrations in the North-West region

The indicator reflects the credit standing of local government units, its financial autonomy is all the greater as this indicator tends to 100%. From the above plot it is observed that the own funds of local governments representing are over 60% of total funds with remaining resources being provided from other sources.

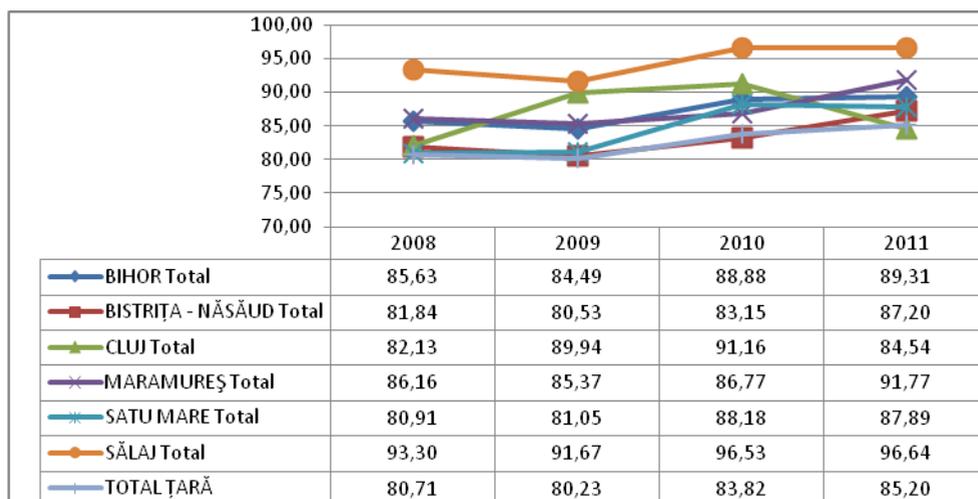
Local authorities should exercise strict control over their own income, but can not control the source of the income tax rate, power tracking this source of income is through deconcentrated central government. The more developed the administrative territorial-unit is in terms economic term the higher the indicator is.

**Degree of own revenue collection (Gr.CVp)** is the collection of own revenues in a given period, compared with the corresponding period's budget.

$$Gr.CVp = \frac{RV_p}{PVP} \times 100$$

where:

- RVP represents the achievements of their income;
- PVP represents the program to achieve their income.



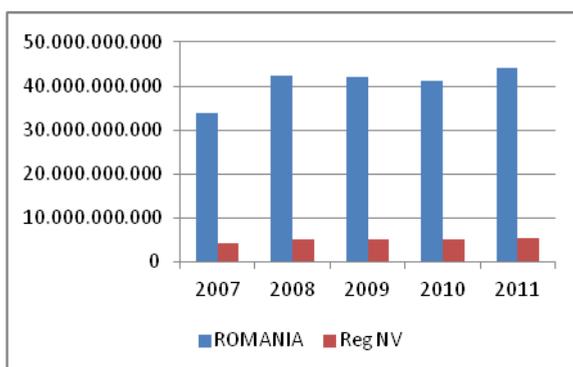
**Graphic 5:** The evolution on counties of the collection of own revenues in the North-West region

Source: The budget and the financial statements of county administrations in the North-West region

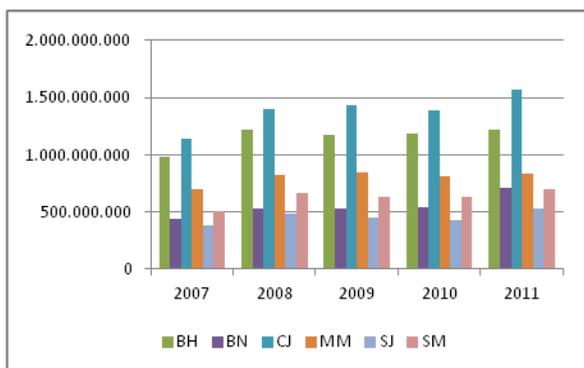
The indicator reflects the ability of local authorities to collect and properly establish their own income. The indicator tends toward 100% so one can say that the level of own revenue collection is optimal and it is more efficient in financial management. From the above plot it is observed that the highest level recorded is in Cluj County, and the lowest in Bistrita-Nasaud. Comparing the data with the country's is noted that the whole north-west region's values are superior to it.

## 2.2. Budgeted expenditure in the north-west region

Specific indicators are indicators that reflect the degree of expenditure flexibility in allocating resources to different destinations.



**Graphic 6:** Evolution of total expenditure in Romania and the North-West region  
Source: The budget and the financial statements of county administrations in the North-West region



**Graphic 7:** The evolution of total spending by county in North West region  
 Source: The budget and the financial statements of county administrations in the North-West region

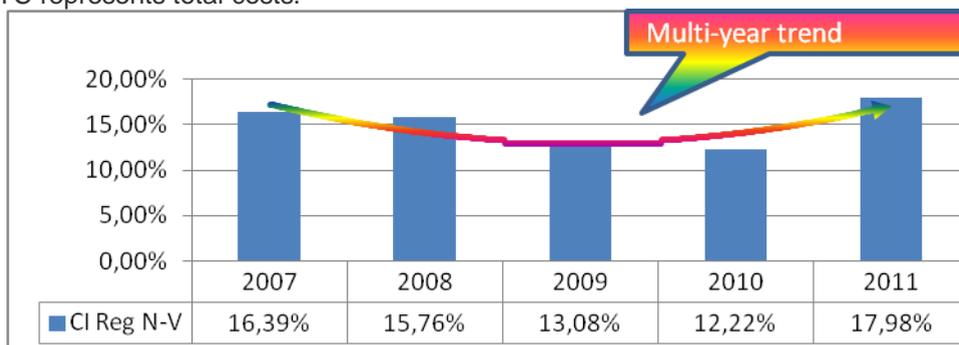
**Investment capacity (CI)** is an important indicator which is calculated as a ratio of capital expenditures and total expenditures allocated and highlights how a local authority local development in a budget year.

$$CI = \frac{C_c}{TC} \times 100$$

where:

CC represents capital expenditure.

TC represents total costs.



**Graphic 8:** The evolution of investment capacity in the North-West region  
 Source: The budget and the financial statements of county administrations in the North-West region

From the graphic above we note that investment is maintained low during 2008-2011 and the growth is in 2007 and 2011. Use of this budgetary practice can provide useful and necessary information for setting policy and long term budget and expenditure prioritization. At the same time, while using other indicators, the tendency or expenditures can be controlled at the expense of development.

The indicator can be used in two ways, namely:

► To determine the ability to invest using resources from its own budget; in the formula expenditures made from funds raised (external grants, loans, etc.) will not be introduced.

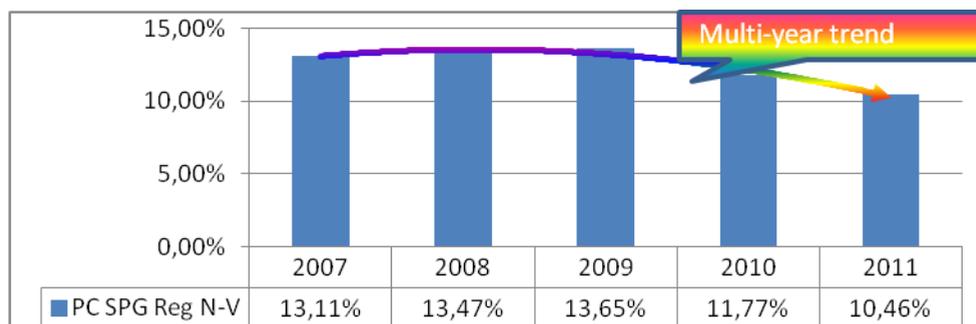
► This indicator is intended to measure the quality of government management so far that in the formula can be entered expenditures made from funds raised.

**General public expenditure share in total expenditures (PC GSP)** is an indicator that can be calculated as the ratio between the total expenditure and budgeted expenses.

$$PC\ SPG = \frac{SPG}{TC} \times 100$$

where:

- GSP represents spending general public.
- TC represents total costs.



**Graphic 9:** Trend in share of overall public expenditure in total expenditure

Source: The budget and the financial statements of county administrations in the North-West region

From the graphic above is noted that this indicator remains at a low level during the period 2009-2011 and the growth is in 2007-2009. The indicator reflects the local government's policy to manage the funds at its disposal to ensure its smooth functioning.

### 2.3. Budgetary performance of North-West region

Results and performance indicators on the one hand reflect the financial management capacity of local governments and on the other hand provide a clear picture of participation in economic activity in the community. The most suggestive indicators are presented below.

**Financial management capacity (CMF)** can be defined as all resources mobilized locally compared to the total expenditure incurred on the basis of the principle of local autonomy:

$$CMF =$$

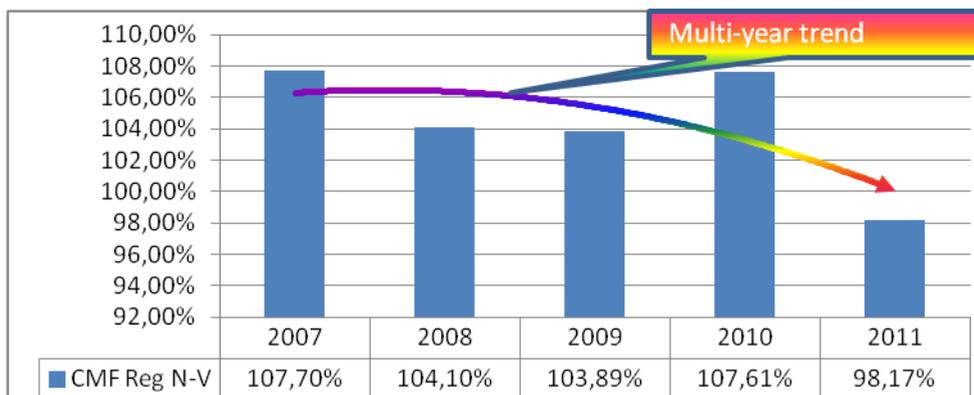
where:

- VR represents income;
- CR represents achieved expenses.

In public finance practice we are confronted with a growing demand for balancing funds, in detriment of developing the quantity of own revenues (taxes on individuals and businesses).

Financial practice of local government is faced increasingly often with a balancing overload of funds in detriment of development in the amount of funds collected from its own funds for the local government which has the power of setting, tracking and collections.

The issue of insufficient financial resources allocated from the state budget should not be neglected while decentralization of responsibilities. The result of this measure, which takes into account how the foundation budget (income and expenditure) and the fulfillment of the approved budget (revenues and expenditures) is met gives a measurable quality regarding the financial management adopted by the authorizing officer and the institution that coordinates.



**Graphic 10:** The evolution of financial management capacity in municipalities in the North-West region

Source: The budget and the financial statements of county administrations in the North-West region

From the graphic above we note that local government covers all costs of income except in 2011, when the coverage is 98.17%.

**Fiscal effort of local government units (EF)** can be defined as the percentage of public revenue local community generates itself, under its elected administration of total local government revenue collected both for themselves and for society.

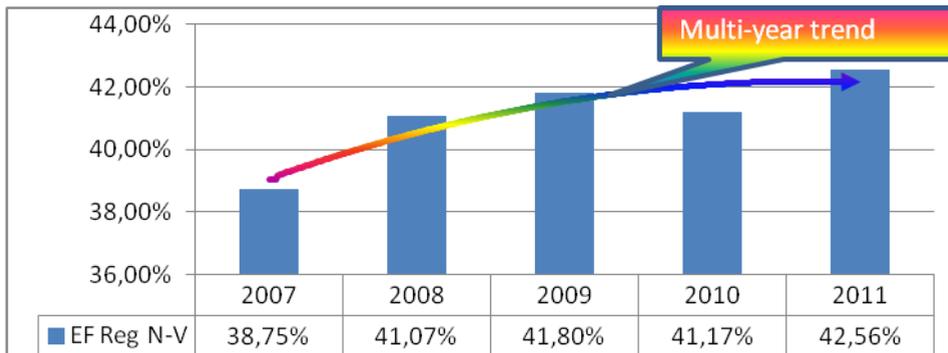
EF

where:

- VGL is locally generated revenues (own income + share split);
- VIL is locally collected revenues (revenues earned + own + share amounts deducted and subsidies, transfers, loans, grants).

In this model considered local revenues are those revenues for establishing competence, tracking and collection belonging to the territorial administrative unit (local taxes for individuals and businesses, revenues from rental and leasing, revenue from the sale of goods).

Local earned income is in this model, all income derived by an administrative territorial unit from all sources during legislation for which the analysis is performed (own income, allowances deducted from certain state income taxes, amounts deducted from certain budget revenues State special purpose or balancing subsidies and transfers, donations and sponsorships). The result of this indicator helps, along with other indicators and local government in particular -the financial management capacity, a pragmatic analysis of effort the local community makes for local economic development and the provision of public services . This indicator can be taken into account and in the preliminary analyzes of stabilising the buget of local communities.



**Graphic 11: The evolution of fiscal effort for territorial administrative units in the North-West region**

Source: The budget and the financial statements of county administrations in the North-West region

From the graphic above we note that the fiscal effort of local governments is about 42%, compared to the income earned by them.

### 3. Conclusions

From the investigations we drew the following conclusions:

- financial autonomy underlying the development of local budgets causes, or - as outlined in the legal literature - has the effect of preserving the individuality of each local budget and local budgets as overall configuration of the budgets of all municipalities, cities and counties in Romania;
- budgetary process, manifested in local government autonomy, means all actions and measures taken by competent state institutions for realization of the financial policy implemented by the government. On the other hand budgetary process assumes the existence of financial resources and their allocation to provide the public goods and public services;
- in local budgets meet, on the one hand, revenues and on the other hand expenditures of administrative - territorial units to satisfy local need;
- In our opinion, the budget process should be evaluated using a system of indicators of income, expenditure and budget execution as to assess the effectiveness of local administration. The analysis undertaken at the local

government in the Northwest region found that financial resources were used by local budgets effectively.

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## COMPARATIVE ANALYSIS OF GLOBAL TERTIARY EDUCATIONAL SYSTEMS

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**Abstract:** *Higher education system occupies a special place in the policy of each nation. Regardless of geographical location, socio-economic or cultural differences, the need to improve the education offered for population by facilitating access to higher education becomes more and more important. Providing a suitable framework for the personal development of each student is expensive and involves high amounts of money. From the analyses carried out we couldn't identify the substantial differences between the way it is structured and organized education system worldwide. However, we were able to identify a number of common elements that create a global University System. The need to invest in human resources through structural reforms in each country is present, and therefore a higher indention to pay greater attention to the development of the higher education system. In our work we decided to analyze education systems in countries like United States of America (USA), United Kingdom (GB), China (CHN), Germany (DE), France (FR), Russian Federation (RU), Japan (JPN) average values recorded for EU-27 and last but not least Romania (RO). Although the investment in the University system is hard to quantify, it is unanimously acknowledged that a country can achieve a competitive advantage in international relations through a very well prepared and trained personnel. The countries reviewed in this paper have different policies when it comes to financial support of the University System. If Germany and France have decided to get involved directly in supporting the system by allocating the necessary funds from the State budget, another European country, the United Kingdom, decided to apply a policy diametrically opposite, similar to that existing in the USA and cover in a lesser degree the needs of universities in Government funds. Regardless of the policy adopted the results are intended to be the same: facilitating access to university education, a high quality of teaching and research process, greater mobility among teachers and students and last but not least, scientific and academic recognition worldwide. However, these reforms, even if they are creating value in an initial stage, over the long term can negatively affect the social situation of the country.*

**Keywords:** *university system; quality; financing; unemployment; perspectives;*

**JEL classification:** H52, H75, I21, I23

## **I. The importance and evolution of higher education system**

A long time to subject of the importance of having a competitive and performant higher education system for a country. Human resource has become an important tool in becoming an important country in the world economic system, moreover to the discussion regarding globalization. As Czech President Vaclav Havel stated "We live in an era in which everything is possible and nothing is certain." (Issues in global education 157: 2000)

The global higher education system undergone a large number of changes and is still suffering reforms in a lot of the countries ever since the second half of the 20th century. As Ulrich Teichler also stated, there are some key facts in this development such as: advanced countries adopted the idea that expansion of higher education system would lead to economic growth and also increasing diversity is desirable by stronger concentration of resources, growing differentiation of the research role, diversity of talents etc. ( Teichler: 2004:11). The importance of this aspect was surprised in 1999 by Altbach „The future is also happening faster than any of us can imagine. These conditions predominate in world politics largely because power is being dispersed not only across nations but across cultures. Education is the medium of that exchange” (Altbach, Peterson, 1999: 6).

The increase of tuition fees, and thus increase the quality of the University system, could lead to an exodus of young people to the countries which are offering a competitive educational system but with much lower costs. On the other hand, a system that enables high school graduates to attend the courses of faculties, without imposing large financial strain, will lead in the long run, to an over qualification of the population and thus leading to the disappearance of some basic careers that do not require higher education. It has not yet been identified a viable education model that can meet all the needs of the market.

We appreciate that the Bologna educational system, involving a very large number of national States, could generate a balanced system from all points of view. However, even if the idea of this process is viable in theory, in practice it is very difficult to implement because the countries which have accepted these reforms are far too different from one other, both culturally and socio-economical. These discrepancies makes the Bologna process to suffer mutations at the level of each country and the long-term impact of education over the social environment cannot be quantified.

## **II. Towards a global higher education system?**

This analysis will present a compared series of qualitative and quantitative indicators which define to a large extent the American, British, Chinese, French, German, Japanese, Russian, Romanian and European education systems. This analysis is based on data supplied by the national statistical institutes of each country, data provided by UNESCO, the World Bank, IMF and EUROSTAT.

**Table 1.** The structure of Higher education in 2012

Country	The structure of higher education and the length of studies (years)			The year of last reform
	Bachelor	Masters	PHD	
USA	4	2-3	3-6	1970
GB	3-4	1	3-5	2010
CHN	4	3	3	1977
FR	3	2	3	2008
DE	3-4	2	3-4	2005
JPN	4	2	3	2004
RU	4	2	2-4	2009
RO	3	2	3	2011
UE 27	3	2	3	1998

Source: Authors calculation based on mentioned databases

In recent years, each university system has undergone major changes, designed to improve the system from all points of view. At first, it was identified the need for a change at the structural level. In this regard, all countries surveyed have adopted a system based on three cycles of study: bachelor, master and doctoral. This grading is beneficial especially for students as they can more easily obtain the equivalence of diplomas when they decide to study abroad. At the same time this structure is beneficial for the authorities in relation to the plan adopted for the development of human resources because it may encourage punctually each level of study. From the structural point of view, Romania was folded tertiary structure required by the Bologna Declaration.

Even though the structure of studies is similar, their duration varies from one country to another. These differences are attributed to the ancient structures of the system. However, even though the implemented reforms have a quantitative impact on higher education, the impact upon quality should be pursued as well. It is not enough to impose reform just to change the form of studies but also to impose a change in curricula, methods of teaching or teacher-student relations. A bad example is Russia, that, even if the country has reformed the University system structure, the quality of the studies has remained unchanged.

Once these reforms are applied, correlated with the impossibility of the Governments to financially support from the State budget the tertiary system, the number of private institutions and the various degree programs with fees from the State universities have seen a sharp increase.

**Table 2.** Total number of higher education institutes in 2009

Country	Type of institution			Access of population to higher education (inhabitants/university) (I/U)
	Public	Private	Total	
SUA	1676	2733	4409	71660 I/U
GB	113	2	115/165**	539200/375806 I/U
CHN	1522	836	2358	547173 I/U
FR	85	0	85/3500*	774375/18806 I/U

DE	309	100	409	200004 I/U
JPN	160	556	716	178673 I/U
RU	653	462	1115	128116 I/U
RO	56	52	108	175925 I/U
UE 27	n	n	4000	125925 I/U

Source: Authors calculation based on mentioned databases

\* According to French law, only the State institutions may hold the title of universities.

\*\* Only two private institutions are holding the title of University, the rest being residential institutions of higher education

Note: n = unreported

Worldwide there are tens of thousands of institutions that provide higher education. However, depending on the country of origin, they have different titles. Whether in Germany or Japan there are only private or public universities in countries like France, the United Kingdom and the United States, in addition to the institutions that have obtained the title of University, there are a number of institutions offering diplomas recognized as higher education but who have other titles.

The majority of the institutions that offer higher education are in America, followed closely by the EU 27 and China. A special case is France, where, under the law, only State institutions may be called universities. Thus there are no private universities, but only public or private institutions providing higher education diploma. In many cases these institutions are more internationally ranked than State universities. The same case is registered in the United Kingdom, where only two private institutions have obtained the title of University. However, compared to France, where there are 85 universities and over 3,400 private institutions, in the UK the difference is much smaller, from 165 higher education institutions 115 are universities. Romania is the country with the lowest number of institutions of higher education, but which nonetheless has the most balanced ratio between the number of State institutions and private ones.

It must be considered that this indicator should be directly correlated with the population. In order for a system to be able to make a difference on an international level it should be able to give the population equal opportunities for access to education. Thus, dividing the number of inhabitants of each country to the number of institutions providing higher education we noted that the wider system is present in France, where for every 18806 inhabitants there is such an institution. At the opposite side rests the British system, where each University must cope with a possible influx of more than 375806 people.

In order to be creator of value, the University system must be competitive both nationally and internationally. For this purpose it is necessary to undertake a direct comparison between the University systems reviewed.

**Table 3.** The university's international rankings (Academic Ranking of World Universities) in 2012

Country	The best occupied positions	Total numbers of institutions in 500 top
SUA	1,2,3,4,6,7,8,9	151
GB	5,10,20,38	37
CHN	151-200	28
FR	40,41,48	21
DE	47,53	39
JPN	21,27	23
RU	80	2
RO	0	0
UE 27	-	197

Source: Authors calculation based on Academic Ranking of World Universities

According to data provided by the Academic Ranking of World Universities, the best universities in the world operate in America. In top 10 positions, 8 of them are occupied by American institutions. The total number of institutions of this country in this top is 151. Highest ranked European University stands in fifth place and comes from the United Kingdom. The weakest position in top is occupied by Chinese system this even though it has 28 institutions in the top 500. The country with the fewest universities present in this ranking is Russia, which even if it has a representative on the 80 position, only two institutions have managed to enter the top 500. Romania is the only country subject to analysis that was unable to have an institution in this international ranking.

A criteria taken into account at the time that these tops are created is the number of students currently enrolled in the studies. However, as we could see, it is not sufficient for the system to have a large number of students if this is not in conjunction with qualitative study programs.

**Table 4.** The total number of enrolled students (thousand persons); the share of students in total population; the share of graduated in total population\* (2009)

Country	Total number of enrolled students (thousand persons)			The share of students in total population (%)	The share of graduated in total population*
	Bachelor	Masters	PHD		
SUA	19,948	479	20,427	6.47%	94,8%
GB	2,394	85	2,479	4.00%	58,52%
CHN	22,317	n	22,317	1.65%	25,94%
FR	2,173	71	2,245	3.41%	54,53%
DE	2,555	n	2,555	3.12%	n
JPN	3,762	73	3,836	3.00%	59,74%
RU	19,948	479	7,500	5.25%	77,19%
RO	673	326.5	999.5	5.26%	58.8%
UE 27	n	n	19,847	3.94%	61.4%

Source: Authors calculation based on mentioned databases

\* as proportion of total population aged up to five years after graduating

Note:  $n$  = unreported

Worldwide a consistent number of persons is involved in a program of higher education. Although in China more than 22 million people attended the courses of the faculty, they represent only 1.65% of the total population, while in the U.S.A this percentage rises to over 4%. The highest percentage of graduates with higher education also can be identified on the North American continent, and the lowest, less than 25%, is identified in China.

At the same time, thanks to a system based much more on the Bachelor level than master's license, both Germans and China does not report specifically the number of students enrolled in this type of program.

Although the number of students is the main criteria for a university system to survive, this variable must be closely analyzed with the absorption capacity of the markets. In order for an economy to be viable, the result generated by the investment in the University system, the graduates, must be creators of value. To be able to do that, first they must be integrated into the labor market

**Table 5.** The share of unemployment with tertiary education in total unemployment (2009)

Country	Total unemployment	The share of unemployment with tertiary education in total unemployment
SUA	7,9%	9%
GB	7,9%	14,3%
CHN	4,1	14%
FR	10%	18,3%
DE	6,5%	11,4%
JPN	5%	19%
RU	6,5%	32%
RO	7,3%	6,7%
UE 27	9,7%	14%

Source: Authors calculation based on mentioned databases

Market capacity to integrate graduates is essential in order for an economy to thrive and to compete in the world market. Among the countries analyzed the largest share of unemployed is registered in France, 10%. However, the largest number of unemployed persons with higher education lies in Russia, 32%, followed by Japan with 19%. The lowest share of higher education graduates who failed to find a job is recorded in Romania. The percentage of our country lies far below the European average, and could be based on the account of a small percentage of the share of higher education graduates in the total population.

These percentages can be attributed to several factors. Among them we can mention in particular the economic situation of the country concerned. Depending on the economic situation of each country, unemployment is directly influenced by the market's ability to hire specialists with higher education and also to remunerate them in correlation with preparation and expectations. Another determining factor could be the number of graduates reported to total working population. If in an economy, the University system is based on a large number of students and to graduate is relatively easy, both in terms of academic preparation and financial point of view,

then the number of those who completed the courses of the faculties will be increased. Thus, they will encounter difficulties in the hiring process, both because of their poor academic preparations and higher financial expectations.

In order to create value the state must be able to efficiently combine socio-economic policies with financial and educational ones. High school graduates should be encouraged to follow university courses, but only those who prove to be competitive to be able to obtain the diploma of specialist. The example offered by USA, and to some extent United Kingdom, through the implementation of very high tuition fees, in medium and long term it might be able to provide the expected results. Such a system would discourage people who wish only to obtain a diploma to pursue university programs. Instead those with notable results, obtaining financial aid from the State, will be able to bring the added value that both universities and labor market need.

Regardless of the academic system, one thing is certain; the universities require a consistent share of the expenditure from the State budget. For this reason, one of the chapters where governments worked steadily has been reforming the financing sources by reducing universities dependence on the State budget.

**Table 6.** Expenditure with higher education at national level (2009)

Country	Total expenditure on education (% of GDP)	Total expenditure at tertiary level (% of GDP)	Total expenditure per student (% of GDP)	Total expenditure per student (USD)
SUA	5,4	1,24	19,4	30000
GB	5,6	0,81	20,6	15000
CHN	3,3	n	85,8	4100
FR	5,9	1,34	39,8	14000
DE	4,6	1,34	42,5	15800
JPN	3,8	0,72	20,9	14500
RU	4,1	0,7	14,2	6200
RO	4,3	1,22	23,9	3400
UE 27	5,7	1,20	28,5	10600

Source: Authors calculation based on mentioned databases

As stated, education in general and higher education in particular requires special attention from the Government because the huge amounts needed from State budget. From the analysis undertaken we can see that of all countries, the United Kingdom allocated some of the largest sums for the education system, 5,6% of GDP. However the University system received only 0,81% of GDP, a percentage similar to that of Russia or Japan, countries which allocated much less to the education. This is due to the reforms implemented in recent years. This reform aims at a reduction of contributions allocated to the universities, in the same time correlated to a massive increase in the amounts coming from extra-budgetary sources, mainly from tuition fees. France, the country with the highest percentage of GDP allocated to education, and Germany, countries where the tertiary system education is almost free, generates nearly double expenses by comparison with the United Kingdom.

Analyzing this problem in terms of gross domestic product per capita, we note that the most significant expenses are registered in China, 85 % of GDP/capita and this even if the State spends only 3,3% of GDP on the education system. This is due to

the very low value of GDP/capita in conjunction with an increased amount of funds needed for higher education. This phenomenon is present also in developed countries, Germany and France, which allocates more than 40% of GDP/capita to higher education. Instead, the United Kingdom and America, systems that generate consistent income from tuition fees, the financial effort on the part of the State is much lower, only 20% of GDP/inhabitant.

So, the amounts allocated to education can reach up to \$ 15,000 annually. As comparison, Chinese State is spending four time less than the German State on higher education. In these circumstances it is very difficult to talk about equity and equality of opportunities between students or university systems. These major differences are affecting the students, the direct beneficiaries of the University system, by the fact that, in countries with financial difficulties, the largest amounts are directed towards meeting the costs of personnel and administrative and not towards the investment in creation of adequate conditions for study and training

From one country to another the financing policy of University system differs. Whether in Germany it is mostly free of charge, in USA, there are no higher education programs financed entirely from State sources, students being obligated to pay a tuition fee that can oscillate between a few hundred dollars on semester up to a few tens of thousands of dollars.

**Table 7** the level of tuition fees and the aid granted to students from the State (2009)

Country	Tuition fees	Financial aid (% of total expenditure with higher education)
SUA	5000-50000 USD	19,6 %
GB	1000-9000 GBP	37,5 %
CHN	1700-8400 USD	n
FR	177-584 EURO (1500-6000 EURO - private system)	7,4 %
DE	1000 EURO	20,7 %
JPN	6500-14000 USD	27,5 %
RU	1500-3500 USD	n
RO	500-2000 EURO	7%
UE 27	0-11000 EURO	17,4%

Source: Authors calculation based on mentioned databases

Most significant tuition fees can be found in the universities on the North American continent. The fee for some study programs can reach 50,000 dollars annually. At the opposite pole, the lowest tuition fees are in the European countries, which allocated huge sums from the State budget to finance this system.

In direct connection with these tuition fees should be analyzed the system of student aid granted by the State. In order to be fair and non-discriminatory, the State must give equal opportunities to all those who wish to follow courses at prestigious institutions. Because financial pressure is high, Governments must help the top students with limited financial resources by offering them the opportunity to access funds on advantageous conditions in order to finance their studies. Note that the

countries with the highest tuition fees have the most developed financial aid system. In countries like United Kingdom over 37% of the expenditure on University system can be found in the financial aid offered to students. However, the case of Germany is an exception due to the fact that the percentage allocated to the financial aid of students, as percentage of total expenditure with higher education is roughly equal to the percentage allocated by the U.S. We conclude that Germany puts great emphasis on academic preparation, facilitating access to education to all those interested in attending an academic program.

Funding of the University system is not an easy matter for any country worldwide. Because of the amounts involved, this system is one of the most expensive part of an economy. Because results can be quantified only on medium and long term, in situations of financial crisis and economic instability, universities are among the first that have to suffer from financial cuts. These funds allocated to higher education system are directly influenced by a number of factors, among which the most important is the economy and the growth of gross domestic product.

**Table 8.** The annual evolution of GDP and government expenditure with tertiary education (%) (2009)

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
U S A	I*	-1.74	32.06	-2.53	9.68	-7.31	7.05	12.39	-7.49	0.18	-5.99
	II**	n	3.36	3.46	4.70	6.38	6.49	5.98	4.87	1.87	-2.47
G B	I*	-5.33	5.97	39.36	0.35	2.74	24.92	-4.95	-12.77	-9.75	-6.66
	II**	-1.49	-0.62	9.74	15.36	18.30	3.60	7.22	14.89	-4.73	-18.54
F R	I*	29.06	3.67	5.80	-1.34	1.96	3.90	4.45	8.51	1.16	2.74
	II**	-9.21	-0.05	8.04	22.37	13.59	3.26	4.97	13.80	9.27	-7.90
D E	I*	3.36	4.22	7.97	5.49	1.32	2.64	1.65	7.92	7.16	2.57
	II**	-11.34	-0.50	6.97	20.60	12.41	1.51	4.85	14.56	9.38	-9.16
J P	I*	22.46	1.22	1.72	15.24	9.23	-3.05	2.03	8.97	2.41	5.12
	II**	6.84	-12.25	-4.33	7.93	8.91	-1.17	-4.17	0.35	11.46	3.14
R U	I*	n	18.05	23.44	27.08	23.67	51.76	35.65	35.88	33.95	-26.47
	II**	32.56	18.05	12.57	24.68	37.39	29.18	29.62	31.29	27.79	-26.42
R O	I*	-14.22	114.45	-4.40	4.60	16.58	22.78	n	82.21	n	13.90
	II**	4.81	8.80	13.31	29.30	27.46	30.84	23.72	39.06	19.76	-20.08
UE 27	I*	n	n	9.94	0.94	4.12	6.48	2.94	5.05	3.37	1.04
	II**	-7.16	0.98	9.28	21.80	15.38	4.58	6.57	15.70	7.94	-10.79

Source: Authors calculation based on mentioned databases

\* I. Evolution of the annual expenditure on University System

\* II. Annual evolution of GDP

This analysis was carried out without taking into account China, due to the lack of consistent data on the amount of annual spending with higher education.

In terms of the coefficient of correlation of high intensity for the entire period under review, the two indicators are currently following the same trend. An increase in the GDP lead to a growth regarding the amounts allocated to higher education. This assumption is natural, in the conditions under which, a functional market economy, with a consistent and stable national wealth, would be able to finance the University system, when an underdeveloped country will seek to fund other sectors of the economy, which could generate in short-term more visible effects.

### **III. Conclusions**

Each country must be able to develop a university system, as far as possible independent of the macroeconomic oscillations, because only by applying a viable long-term strategy, they can be creative. In 2009, once installed the economic crisis, all countries surveyed had to reduce budgetary expenditure, generating a consistent cutting of funds allocated to higher education.

From the analyses carried out it is observed that, by applying a policy diametrically opposed, University systems can become competitive at an international level. There is no successful policy that could be applied globally. If considered the international university rankings, the U.S.A. system has proved to be the most viable, constituting the foundation for developing prestigious educational institutions. In recent years, although the Bologna system was adopted the reforms adopted by the United Kingdom are strikingly similar to the structuring of the overseas education. In light of the fact that in Europe and also in Asia, in contrast to U.S.A., the higher education system is regulated at constitutional level, and is an issue in direct subordination to the Governments, makes the U.S. system impossible to be applied with success on the old continent.

The University system is complex and requires massive public funding. The reforms must relate to the need of the markets, to the possibilities of institution and not least with the needs of students and teachers.

The challenges ahead for the global education system in the terms of globalization is therefore increasing mobility of students and movements of academic programs, the impact of innovation and technology, the increasing number of students and the challenge to increase quality to name a few. The future is opened to changes as Le Bras stated "Shifting demographics, technological breakthroughs, and the volatility of international political and economic condition make it unlikely that patterns of the past will easily or reliably predict the future" (Le Bras, 2008).

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## THEORETICAL ASPECTS OF FINANCIAL LIBERALIZATION PROCESS

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**Abstract:** *Financial liberalization process and its implications on financial emerging markets have been multidisciplinary research since 1970. Reform of financial liberalization is a complex and long phenomena. This implies that the impact of this reform on financial markets should not be immediate, but rather gradually during a long time period. It is also important to note that liberalization does not occur in the same way on all financial markets. Each country, according to his specification regarding the economic climate and the specificity of financial markets, has differently set its progress of liberalization process. It is generally accepted that the process of financial liberalization is not composed of a single event, but a series of events. The idea is that market reform is a gradual process where the data identified above only refers to the most significant events. Regarding the effect of liberalization reform on emerging markets has been shown; on the one hand, that liberalization helps to reduce the cost of capital, helps to integrate the emerging markets in the global market, enhances economic growth and allows emerging markets to become more mature. On the other hand, financial liberalization process has a very ambiguous and inconclusive impact on informational efficiency and volatility in emerging markets. Launching liberalization reforms provided an analytical framework for studies that attempt to investigate the effectiveness of emerging markets and empirical links between liberalization and efficiency. The first reason is that with liberalization, the authors believe that emerging markets have become more speculative and more competitive. So there is a chance to see if the weak form market efficiency is verified. The second reason is that the authors explore the relationship between liberalization and efficiency. Researchers and regulators seek an answer to the fundamental question: financial liberalization helps the stock market become more efficient? Financial liberalization is not a riskless process.*

**Keywords:** financial liberalization; stock market; capital

**Jel classification:** O16; G10; G32

### 1. Introduction

Financial liberalization process is not a contemporary phenomenon. For decades, Western countries and companies were operating in a free economy. Thus, it is difficult to identify the beginnings of financial liberalization process. It is sufficient to recall the role of bankers in Europe Italian Renaissance in the nineteenth century in

order to illustrate the importance of English and French capitals in the world, especially in the colonial empires in Russia, and the influence of American capital movements following the crisis in 1929.

Financial liberalization includes several elements; it reflects a variety of restrictions that were imposed. This may includes: capital account liberalization, financial sector liberalization and capital market liberalization (Table 1).

**Table 1:** Elements of financial liberalization

<b>Capital account liberalization</b>	<b>Financial sector liberalization</b>	<b>Liberalization of stock markets</b>
<b>Criteria for liberalization</b>		
<i>Bank loans and foreign companies</i>	<i>Interest rates</i>	<i>Acquisition by foreign investors</i>
Banks and companies are allowed to borrow abroad. They should inform the authorities, however, a license is granted almost automatically. Required reserves are less than 10%. The minimum maturity is not more than two years.	There are no controls on interest rates.	Foreign investors are allowed to hold domestic equity without any restrictions.
And	And	And
<i>More exchange rates and other restrictions</i>	<i>Other indicators</i>	<i>Repatriation of capital, dividends and interest</i>
There are special exchange rates for both current account transactions, but not for capital account transactions. There are no restrictions on capital outflows.	There are no controls on lending (subsidies for certain sectors or certain credit allocations). Deposits in foreign currencies are allowed.	Capital, dividends and interest can be repatriated freely within two years of the initial investment.

Source: Souza (2004)

## 2. Literature review

Many studies have been made to highlight the impact of financial liberalization on the financial sector and the overall economic performance of emerging economies. Thus, some authors praise the benefits of financial liberalization. There has been shown that financial liberalization contributes on the one hand, to strengthen the functioning of financial systems, improving the competitiveness of the banking and financial sector and the transformation of savings into funds available for financing the economy. On the other hand, helps to promote international diversification and access to global capital markets. For example, Kim and Singal (2000) argue that abandoning controls on the financial sector leads to more efficient capital markets in

emerging economies allows guiding existing funds and national economies to the most productive investments. Levine and Zervos (1998), Stulz (1999) and Mishkin (2001) argue that liberalization will improve transparency and reduce liquidity problems in developing countries. Other authors, such as Bekaert and Harvey (2000) and Henry (2000) claim that, particularly, in emerging markets participants can enjoy new gains from international diversification and cost reduction capital after liberalization. Also, Bekaert et al. (2001) argue that economic growth tends to be improved as a result of financial liberalization.

Financial crises of the 1990s show that financial liberalization is not a process without risk. Indeed, the banking system was fragile and collapsed in many emerging economies. Economies where there were high growth rates have become characterized by severe recession. Also, a negative phenomenon is to increase the risk of financial instability, which is caused by the free movement of capital. This is why, after the Asian crisis, many authors have found that financial liberalization took place too quickly and expanded too far, so there was a request for resetting up controls on the financial sector. Stiglitz (2000) suggest that there must be set some limits on capital flows to moderate excessive capital inflows and outflows due to problems of over-reaction to the shock and herding behavior of investors in periods of high uncertainty. Krugman (1998) considers that the free movement of capital flows was one of the causes of the Asian crisis, and recommends implementing controls to reduce the adverse effects.

Empirical financial literature, despite its abundance, failed to reconcile this conflict of opinions. Empirical results highlighted in the literature on financial crises suggest that financial markets have in center financial turmoil. Proponents of the theory of the occurrence of crises especially emphasized the destabilizing nature of financial deregulation [Corsetti et al. (1999), Kaminsky and Reinhart (1999)]. Instead, the financial literature suggests that removing controls from financial markets and capital flows are beneficial to emerging economies because they keep them most liquid and substantially reduce the cost of capital (Bekaert et al. (2002), Henry (2000)]. For Kaminsky and Schmukler (2003), the difference in views on the expected impact of liberalization on emerging economies could result from the fact that some articles are focused on short-term effect of liberalization, while others are focused on its effect on long term. The authors point out further that in most cases, empirical studies neglect the idea that liberalization is dynamic and progressive, for which should not be allowed to reach definitive conclusions.

### **3. Advantages and disadvantages of financial liberalization**

#### **3.1 Arguments in favor of financial liberalization process**

In the early 1970s, the economic environment was very different from today. Many national economies were characterized by financial repression. This means to set constraints on financial system, such as taxation of bank reserve requirements (often large), to put barriers on the free movement of capital flows and restrictions on the access of foreigners in domestic industries. All these are the main obstacles to economic development, because they impeded the international exchange. The situation was even more critical as domestic resources were insufficient to finance the economic development. To avoid different crisis, all countries were subsequently forced to open its stock markets to foreign investors in order to seek external funds.

Liberalization was thus created and it started by removing regulations that constrain the international flow of capital (Stiglitz, 2000). Initially, this financial process was adopted by the largest economies in the world, like Germany in 1973, followed by United States in 1974. Emerging countries waited until the early 1980s, when the governments understand the role and importance of financial liberalization process. The main reason was that the loans granted by foreign banks in favor of emerging markets, which were the only source of external financing, fell sharply following the debt crisis in Latin America during the period 1982-1983 (Richard, 2002).

Among the arguments that favor the adopting the financial liberalization process, we can include monetary measures, namely: (i) the economic growth, that is driven by demand factors of production (capital and labor) and the rate of productivity growth, (ii) the currency supply, it is an exogenous variable of the system and it can be controlled by monetary authorities and (iii) inflation, it is attributed to an excessive increase in the money supply relative to the actual rate of production increase and it can be moderated by reducing the growth rate of money supply.

These arguments did not present a clear relationship between money growth rates and inflation, on the one hand, and real output growth on the other. The monetarist argument is based on the assumptions that are related to the degree of employment and aggregate money supply that is driven by macroeconomic policy. Neither of these assumptions is valid, because in a world of financial innovation, quasi-money can be created, global liquidity in the system cannot be rigidly controlled by the monetary authorities. Thus, we can say that the actual liquidity in the system is determined endogenously. Therefore, the real monetary variable that is in "government hands" is the interest rate.

There are some negative economic and social effects of financial liberalization, which are often so large that they outweigh any benefit that regards the access to more capital inflows. This refers to both financial markets and the economy. This means that financial liberalization creates exposure to the following types of risk: a trend towards financial crises, both domestic and foreign; a deflationary impact on real economy and limited access to funds for small producers. This in turn has major social effects in terms of job loss.

### **3.2 Disadvantages of financial liberalization process**

#### *Financial fragility and the tendency towards crisis*

It is now widely accepted that financial liberalization has led to increased financial fragility in developing countries, which conduct them to periodic financial crises. These refer to the domestic banking crises and currency crises. The origin of many crises can be traced through the transition to a more open and liberal regime in financial terms, because it unleashes a dynamic that pushes the financial system to a poorly regulated and oligopolistic structure, with a corresponding increase in fragility. Greater freedom to invest, including in sensitive sectors, such as real estate and stock markets, the ability to increase exposure to certain sectors and individual clients and increase regulatory tolerance, all lead ultimately to increased cases of financial crisis.

Financial markets are known to be predisposing to crises, due to their public characteristics of information. Agencies must acquire and process all these information. They are characterized by insufficient monitoring by market participants. Individual shareholders tend to refrain from investing time and money in the

acquisition of information regarding the management, hoping that others will do so, and they may benefit from the obtained information (Reinhart and Smith, 2002). Thus, it appears to inadequate monitoring information, which will lead to risky decisions and malpractice. Financial firms that want to reduce or avoid monitoring costs, they can simply follow the investment decisions of other financial companies leading to what we call "herd instinct", a feature of the market players. This does not limit the access to finance for some agents, but could lead to over lending entities whose failure could have systemic effects.

#### *The effects of deflation and development*

The strongest criticism of financial liberalization process refers not only to the increased possibility of occurrence of crises, but the argument that it has a clear bias against deflationary macroeconomic policies and force the state to adopt a deflationary position to appease financial interests (Patnaik, 2003). To begin with the need to attract international capital means that there are limits to the possibilities of intensifying taxation, especially on capital. The financial liberalization process has reduced indirect tax revenues of states that were under the financial liberalization. This imposes new limits on government spending because financial capital is generally opposed to large fiscal deficits. This affects the economic growth or development activities of the state.

Covering the deficit is seen as increase liquidity in the system and therefore is regarded as being potentially inflationist (Prasad et al, 2003). Inflation is the anathema to finance because erodes the real value of financial assets. However, government expenses are "autonomous" in character, so that the use of debt to finance such autonomous spending is seen as placing a arbitrary player in financial markets, which is not driven by profit reasons, whose activities may cause differences in rates interest, so further financial profits become more unpredictable. If the deficit leads to a substantial increase in debt, it is possible for the government to intervene in financial markets to reduce interest rates that can have an impact on financial returns.

#### **4. Internal liberalization versus external liberalization**

Financial liberalization refers to measures aimed at eliminating or reducing direct regulated controls on institutional structures, instruments and activities of agencies in different segments of the financial sector. These measures may relate to internal or external regulations [Chandrasekhar (2004)].

*Domestic financial liberalization* refers to financial reforms and involves, in particular, banking reforms and privatization policies. In theory, domestic liberalization should allow free-floating interest rates and central bank policy to manage credit and loans. However, fluctuations in interest rates are expected to depend on the currency demand and supply of traders.

Internal liberalization typically includes some or all of the following:

➤ Reduction or elimination of controls on interest rates and fees charged by financial agents. Of course, the central bank continues to influence or manage rate structure by adjusting the discount rate and its own market operations. But usually, deregulation eliminated interest rate ceilings and encourages competition among financial companies, which aimed to attract depositors, on the one hand, and to tempt the potential lenders in the loan contract, on the other hand. As a result, price competition limited expansion and forced financial firms (including banks) to depend on the volumes traded for ensure profits.

- Withdrawal of the state from financial intermediation by converting "developing banks" in regulated banks and privatization in the banking sector. It is usually accompanied by the decline of direct loans and eliminating the requirements for special credit allocations for priority sectors (whether they are public), agriculture, small producers, and other sectors regarded as for strategic priorities or economic development.
- Relaxing the conditions for the participation of both companies and investors on the stock market by eliminating or reducing listing conditions, by providing freedom in fixing the prices of new stocks, by allowing a greater degree of freedom to intermediaries such as brokers.
- Reduce controls on investments can be undertaken by financial agents. Most regulated financial systems have tried to keep separate different segments of the financial sector, such as commercial banks, mutual funds and insurance companies. Agents from one segment to another segment can not invest for fear of conflicts of interest which could adversely affect business. Removing the "wall" between these sectors leads to "universal banks". This means an increased interdependence of financial structures.
- The liberalization of the rules governing the various types of financial instruments that may be issued and purchased in the system. It transforms the traditional role of banks in the main intermediate that introduce the risk in the system. Conventional, banks have agreed liabilities with short maturities of small entrepreneurs who were highly liquid and involved lower costs and reduced risk capital, respectively that have made large investments, relatively illiquid and risky on the medium and long term. *External financial liberalization* typically involves changes in the exchange rate regime. Usually full convertibility for current account transactions were accompanied by trade liberalization reforms either consecutively or simultaneously, which are then filled with different degrees of capital account convertibility. External liberalization is interested in policies that facilitate foreign capital inflows on domestic markets, and in this way, in the participation of foreign investors. This type of liberalization involves the following, but with a wide variety of implemented models:
  - Measures allow foreign residents to hold domestic financial assets in the form of debt or equity. This may be associated with greater freedom for domestic firms to undertake external commercial borrowings, often without government guarantee. It may also involve the reduction or elimination of controls on the entry of new firms in the stock market.
  - Measures allowing domestic residents to hold foreign financial assets. This is usually seen as a drastic liberalization method, because it facilitates capital flows to domestic residents in times of crisis. However, some countries that receive excessive capital inflows have resorted to such measures as a measure to reduce pressure on the exchange rate.
  - Measures that allow to foreign currency assets to be held and traded freely in the national economy. This is the most extreme form of external financial liberalization, which has been implemented in a few countries.
  - Expanding resources and tools through which businesses or financial agents can access funds .This leads to the proliferation of instruments, such as commercial papers and certificates deposit issued by domestic market and allows access of offshore products on secondary market such as ADRs (American Depository Receipts), and GDRs (Global Depository Receipts).

Financial literature focuses on external liberalization in general, and in particular, the policy that facilitates international investment portfolios (Nguyen and Bellalah, 2008). The purpose of these policies is to ensure that in a liberalized market, foreign investors hold, without having to be subject to restrictions, listed financial assets in emerging markets and domestic investors to hold the right to trade securities issued on foreign markets. Therefore, all deregulations that aimed the opening of national markets for non-resident investors are seen as the first elements characteristic of external liberalization process.

### 5. Indicators of financial liberalization process

Financial liberalization can be recognized by official data and the effects of liberalization occurred, such as the introduction of ADR and investment funds, or a significant increase in U.S. capital flows. To better understand this reform is important to study the shown effects (Arouri et al, 2010).

#### *Foreign capital flows*

Foreign capital flows to emerging markets reflects the effects of financial liberalization and is thus the first actual indicator of reform. These streams comprise mainly foreign direct investment flows (FDI), portfolio investment flows (international equity portfolio flows), cash deposits and bank loans (table 2).

**Table 2:** Capital inflows and outflows on emerging markets during 2000 - 2007

<b>Capital flows (bil. \$)</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Foreign direct investment	212	228	190	204	276	374	464	533
Portfolio investment	97	16	-8	92	139	213	347	475
Banking loans and deposits	2	-57	3	124	200	171	363	968
<b>Total capital inflows</b>	<b>311</b>	<b>187</b>	<b>186</b>	<b>420</b>	<b>615</b>	<b>758</b>	<b>1174</b>	<b>1975</b>
Foreign direct investment	-101	-52	-50	-43	-130	-145	-262	-332
Portfolio investment	-106	-110	-90	-130	-171	-264	-529	-511
Banking loans and deposits	-132	43	15	-140	-198	-261	-415	-782
Reserve assets	-140	-133	-191	-361	-502	-586	-752	-1258
<b>Total capital outflows</b>	<b>-478</b>	<b>-252</b>	<b>-316</b>	<b>-673</b>	<b>-1001</b>	<b>-1256</b>	<b>-1958</b>	<b>2884</b>

Source: Arouri et al (2010)

#### *American Depositary Receipts (ADRs)*

The introduction of ADRs is considered as an important event of the liberalization process. In many cases it may precede the official date of liberalization of the local

market. ADRs were first introduced to Morgan Guaranty Bank in 1927 to help U.S. investors to purchase securities listed on foreign markets, these markets are closed to foreign residents. An ADR is a negotiable certificate of deposit issued by U.S. banks and represents a specified number of shares of a foreign market that are traded outside the United States. ADRs are denominated in U.S. dollars and traded on U.S. stock markets like New York Stock Exchange (NYSE) and American Stock Exchange (AMEX).

#### *The introduction of closed funds*

A closed-end fund is an investment company that issues shares in national markets and use various procedures to invest in shares of companies that are in a foreign country. Thus, investing in a closed-end fund allows exposure to local markets and international diversification. Before the liberalization of stock markets, unit trusts funds provide a measure for investors to gain access to some emerging financial markets where investors have no right, legally speaking, to deal with domestic stocks.

## **6. Conclusions**

The impact of financial liberalization can be properly assessed only if the following aspects are considered:

- The market could have immediate reactions to the information disseminated;
- Market participants might anticipate and react before the event of financial liberalization process. Indeed, the market can be informed before deciding the financial reform, the rumors or the time lag between the announcement and effective liberalization date;
- The market could have delayed reactions to the events of financial liberalization. This idea comes from the fact that financial liberalization is not complete after the first event, and there are other subsequent events that follow;
- Financial liberalization is a part of economic and financial reforms from a package, which simultaneously affects the national financial system, the stock exchange market and capital account;
- Changes in the behavior of emerging markets are not only because of financial liberalization process. It is important to simultaneously monitor the impact of reforms;
- Country-specific factors such as political and economic conditions, could significantly influence changes in the banking and financial sector. Many countries have opened their stock markets to foreign investors in times of economic prosperity, to avoid selling securities at discount. These factors must also be controlled.

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## MEANS OF ESTABLISHING CHURCH PROPERTY AND FUNDING SOURCES

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**Abstract** *Regarding the administration of goods, the Church finds guidance in the laws of the State to which it belongs (Stan, 1952) but taking into consideration the fact that the Church cannot “have its special principles and rules contradicted”(Floca, 1990: 448). However, the church, in fulfilling its purpose - the salvation of believers, needs wealth or heritage. This is not to understand that the Church can “lose its essential character, supernatural character, because, for the Church the earthly possessions and temporal happiness are not an immediate end” (Floca, 1990: 451-452). To understand the Church’s sources of financing it is necessary to take account of its properties. Along the time the church was holder of ownership rights. Its property had to be maintained, at least, so it needed funding. The Church’s canonical and statutory provisions are those governing the Church’s source of funding. They cannot conclusively be understood without observing the principles and rules specific for the ecclesiastical wealth management. Noted should be that previously there were no generally accepted rules on the management of financial resources of the church. The canonical, legal and statutory establishments have become customary in time, making it possible this way, by the dioceses supervisors, that sources of funding should be directed towards the maintenance of the Church, of the worship and of social activities.*

**Key words:** *sources; financing; Church; patrimony; canons; principles.*

**JEL codes:** *Z12, K11, G02, G32*

### **1. Judicial means for Church property configuration**

A question has to be asked: how did the Church manage to possess property and financial resources before the promulgation of the Edict of Milan by the Emperor Constantine the Great? This comes especially for that before enjoying religious freedom throughout the Empire, the Church had in its property cemeteries and sacred buildings. Also it had productive land assets. We can say that religious buildings were more modest at first, but since the 3<sup>rd</sup> century “we witnessed the building of churches, private homes, these not being used anymore as places of gathering and prayer. The basilica discovered at Dura Europos in Mesopotamia was set up at the beginning of the 3<sup>rd</sup> century. In the year of 202, at Edessa, the Christian basilica was severely damaged by flood. Under the ruling of Emperor Alexander Severus (222-235) the community of Rome would register a trial against the leister association due to a piece of land located within the town, the King’s decision favoring the Christians.” (Hertling, 2003: 79)

In the past, for instance, a man of wealth was preferred to be in charge of a diocese, for the local Church “to profit from his wealth, even if it only concerned the building of places of worship or the refurbishing of the existing ones, all at his own expense” (Bernardi, 2002 :53). It should be mentioned that “these practices did not come as a

shock to the masses, who were quite far from having the perception of equality the way it is perceived by the modern society. In fact, everyone prefers a bishop from among the great lords, for the simple reason that he would be a social protector for the ones of his own. He would know the judges and tax agents; provincial governors and generals, even ministers who were old comrades during their studies, his friends or relatives. Such a bishop could be counted on for lending a helping hand when needed. These family burdened bishops tended to leave their position as inheritance for their sons so as to place their family among the clergy. Their daughters would marry priests or bishops. More so as the bishops and priests are exempt from tax, as it was settled before for the pagan clergy. Very soon there would be set up true Episcopal dynasties. The modern observer, taught against nepotism, will have a prompt reaction. Contemporaries, however, from Diocletian onwards, being accustomed to seeing sons following their fathers' steps, did not feel at all spiteful" (Bernardi, 2002 :53)..

It is assumed that previous to the Edict of Milan, patrimonial goods belonged to individuals, the Roman citizen, and not to legal entities, in this case the Church (Hertling, 2003: 80). From another perspective, however, "in ancient times, not only could someone become legal entity without much difficulty, but they could also easily buy, possess and sell, inherit or donate without legal title issued by the State. This way the existence of a collective heritage was possible". This way only can be found an explanation for the vast property which the Church possessed in the 4<sup>th</sup> century, referring to establishments for social protection, homes for the poor, hospitals, homes for the elderly, small children's swing (Stan, 1957: 267-277) all of these witnessing a main charitable work performed under the protection of the Church set up by the followers of Christ.

The Edict of Milan in 313, enacted by Emperor Constantine the Great, entitles the Church the right to possess properties, formally. But the one who cared in a very exceptional manner for the administrative organization of the Church was Emperor Justinian (527 - 565). Without changing any of the principles inherited by the Church from the Holy Apostles, he put them in order and allowed their clear development (Gerostergios, 2004: 234) understanding that the property of the Church is especially needed in terms of philanthropic activity.

It is worth noting that every local Church – according to the law – enjoys the privilege of being the subject of law and due to its legal character it can receive goods through legal channels and thus having the right to increase its wealth. If there are to be found testimonies regarding helping Christians since ancient times from a rich Church directing material aid towards a poorer local church, this fact was based on "the virtue of love" (Floca, 1990: 472) superior to any other human laws. Ownership is offered recognition also in the case the other establishments operating under the blessing of the Church – the asylums for the poor, orphanages and all charity organizations of religious character.

If this way property rights are regulated for the Eastern Church, in case of the Western Church property rights are offered recognition not in the case of local Churches but in the case of the Roman Catholic Church, as a whole, represented by the Pope who grants local churches only a right of usufruct, disrupting property rights.

Regarding the Church, it indulged variety in the forms of ownership. According to conciliar decisions (Jubilee Bishops' Council of the Russian Orthodox Church, 2002: 217), it was considered that any form of property may lead to sinful manifestations

such as theft, accumulation, unjust distribution of the results of labor as well as to an appropriate and justified use of material goods.

Currently, in the case of the Romanian Orthodox Church, the main sources for financing practiced by its establishments are:

- contributions from parishioners;
- the funds from the state budget for salaries and investments;
- the funds from its own incomes for the remaining costs;
- sponsorship
- donations;
- domestic loans;
- foreign loans (Greceanu-Cocoș, 2010: 6).

### **1.1. Donations**

This form of aid was practiced by Christians ever since the time of the Apostles, “and no one among them was left out, because the ones who possessed land or houses and sold them brought in the sums they received” (Acts of the Apostles 4, 34). Bringing goods together “in the Jerusalem community was not a mass phenomenon and it was practiced only by some who were free to preserve their property or sell it.” (Preda, 2002:119). Christians showed willingness towards donating based on the idea of faith solidarity with their fellows in need.

Of the goods collected then emerged the charitable actions of the Church but “this was rather spontaneous and personal, where the help was granted according to everyone’s need and degree of poverty”(Preda, 2002:119). The representatives of the Church focused not exactly on external communion of the goods but more on the inside one. The Christian conception was based on a limitation of property rights that the parishioner had on a certain good so that he could exercise his attributes of possession, use and disposition of that property without any obstruction from the Church.

If in the early times of the Church Christians jointly used material goods, this proved effective for this type of property relations contributed to the strengthening of the believers’ spiritual unity in many cases, as in monasteries, it turned out to be cost-effective. It is worth adding that sharing material goods in the Church was of a purely voluntary character and it was triggered by people’s own spiritual option when joining the Christian community.

Among donations there can be mentioned:

- agapes; (Acts of the Apostles, 7,1- 7)
- firstfruits;
- tithe;
- offerings to the altar.

The Agapes were Christian meals that followed immediately after the Sacred Mass (Acts 7.1 -7) (<http://www.teologie.net/2009/12/12/agapele-mesele-fratesti-ce-insoteau-euharistia-in-primele-veacuri/> 30. 11. 2012).

Regarding the firstfruits, the Church received the first produce gathered by the Christians and derived from agricultural activities. Tithing is constituted as a share of the total product of owner’s labor and harvest of the respective land. Once harvested the farm produce were then offered to the Church (Soare, 1948:59). It should be noted that the Church did not accept donations obtained through ill-gotten activities. Preferred were only those gifts that came from “honest labors” (Soare, 1948:59). The

offerings at the altar were formed either by cash or by natural goods (Soare, 1948:59).

The Church rewarded those who donated various material goods through prayer and remembrance through aloud reading of the names by the religious servicemen. When the remembering of the dead was performed by prayer, the offerings brought were distributed among the poor.

If priests proved worthy in the administration of material goods the Christians did not hesitate in providing the Church with ever more material goods. It should also be noted that donations came also from the Christians entering the monastic life of the Church, which was another way of increasing the Church's heritage (Soare, 1948:64).

### **1.2. Regular contributions of parishioners**

Expenditures for maintenance of religious establishments and for the development of ecclesiastical activity is financed (Greceanu-Cocoș, 2010: 18) from own revenues that have to be managed in accordance with the statutory provisions of the Romanian Orthodox Church.

A very important source of funding is made up of the contributions of parishioners embodied in the form of collections that are undertaken during the public and private religious services. Collection was practiced since the time of the Apostles: "If we have sown unto you spiritual things, is it of any importance if we reap yours earthly?" (I Corinthians 9.12).

Collections can be divided into regular or occasional. These were organized usually on Sundays but they were also undertaken in the proximity of fasts. Every parishioner put in a box what he considered to be for charity (Soare, 1948:69), keeping the box inside his home.

In very exceptional cases, other collections were organized. Some collections were stimulated by Church ministers and others occurred spontaneously on the initiative of parishioners.

### **1.3. The gifts of the kings**

Wealthy Christians offered the Church various goods or real-estate to support charitable undertakings. We remember hereby the courtesy of deaconess Olimpiada.

Impressive details on the deaconess Olimpiada we may gather from the story of her life. The research (Saint John Chrysostom, 1997:73-84) making comprehensive reference to her life was put forward, apparently, by Heraclid of Nyssa. Thus, we learn about the Olimpiada that she descended from the lineage of the vicar Avlavie and for a short period of time, she was married to Nevridie, vicar in the fortress of Constantine. All assets held by this pious woman were given to the Church once she became widow. Considering it to be her duty to entrust the Church with all her belongings, and considering St. John the Chrysostom, patriarch of Constantinople, the deaconess Olimpiada gives to the community "all her other real-estate property located in all provinces together with the rights held on public procurement, and she also ordained as deaconesses of the Holy Church three of her relatives, Elisantia, Martiria and Paladia, so that the monastery founded by her should forever celebrate the four ministries" (Saint John Chrysostom, 1997:77).

Kings would pass different laws in the support of legacies and donations (Soare, 1948:64). For example, Emperor Justinian saw that there were some Christians who

signed wills by which they donated money without indicating any individual person or legal entity as recipients, so he decided that these goods that were subject to donation are to be left to the church where the testament was written. The treasurer of that respective church had the duty to manage the assets in accordance with the law and to direct them towards their proper destination (Soare, 1948:65).

Also, emperors granted certain tax opportunities for the Church. Moreover, the taxes owed to the State would be reduced or the emperor himself would intervene so that the benefits registered by the Church of Constantinople should be directed towards the Church's charitable activities, reducing the number of ministers in Constantinople (Soare, 1948:65).

#### **1.4. The contract for sale and purchasing**

Property and its three attributes – possession, use and disposal – is a vital thing for the being of an individual or a legal entity. Regarding the ways of acquiring property (Hanga, 1977: 269-277) by natural right these could be: occupation (occupatio), tradition (traditio), accession (accessio) mixture (confusio) and specification. We cannot ignore that property acquisition could be made by the judiciary and by the rule of law.

As the dismissal of property rights, although of entire and perpetual character, the property may become extinct in case the object (work on which the holder has ownership) has been lost or in case of slaves when they died or were simply released.

## **2. Canonical and legal provisions related to the sources of the Church's financing**

State laws may help the Church as long as these edicts not always contradict the teachings of the Church. If we were to define the term “canon” then we could rally our opinion to the one on an author who defines the canon as the sum of faith-related teachings settled by the Church “in the true image of the Holy Spirit, in the ecumenical or local councils or by its great Fathers” (Phidas, 2008:22 ).

Noteworthy is that these statements called canons should not be taken out of the context of the time they were issued. There must be taken account of the era in which they were written because “it is clear that separating the specific content of the canons from their historical context, it would be difficult, if not impossible, to recognize the true intention of many canons and the message the Church wanted to highlight through them” (Phidas, 2008:25 ). It should be borne in mind that, regardless of the authority that issued the canon, collective or individual, that guidance or that canon “does not express the mystery of the Church only if the content relates clearly and on spiritual level to the fullness of the content of Christ's revelation and to the fullness of the spiritual life of the faithful” (Phidas, 2008:39 ).

In the same vein, we should add that “not the letter, type, shape, material structure of canons are an absolute essential element of the Orthodox canonical tradition, but that their historical liaison with the Holy Spirit, they became authentic carriers of an essential element in Christ's saving message. This way, the Orthodox Church will never accept to turn to absolutism the force of the historical form of canons, nor has it tried to marginalize them within the religious life. The Church feels free to explain and update the content of Christ's revelation according to the spiritual needs of the faithful, whether within administration or in the pastoral mission, but maintains the

strength of the canons as a reliable criterion, on which its legal power should ceaseless rely on. The correct use of canons does not imply, of course, their unconditional or anachronistic application of historical issues in the modern era, as the canons would then become an object of worship, but their pastoral spirit, for the genuine continuity of the Church's mission in the world of today" (Phidas, 2008:102-103).

The Church did not promulgate canons led by the thought of providing a legal or judicial tendency for the Holy Fathers' settlements. The laws left to the Church by the Holy Fathers were directed towards healing the fallen ones in grave sins. Therefore, the canons of the Church are of curative and therapeutic character (Yannaras, 2002:189).

### **2.1. The Apostolic Canons**

*The 3<sup>rd</sup> Apostolic Canon* and *the 4<sup>th</sup> Apostolic Canon* refer to offerings, gifts that believers bring to the altar or for the clergy. The 3<sup>rd</sup> Apostolic Canon prohibits the bringing of gifts to the altar and was similar to pagan rituals but the next canon provides that products brought by Christians are to be used for the maintenance of the church and for the clergy. In the early period of the Church clergy maintenance was the responsibility of the community they served (Floca, 2005:9-10)

*The 38<sup>th</sup> Apostolic Canon* states that the bishop is the main treasurer of the Church's property. It should be noted that this canon "shows the bishop's full competence in all ecclesiastical matters, he being obliged to care for the Church's property and the right of administration according to the needs of the Church" (Floca, 2005:31)

On the other hand, the bishop as spiritual leader of his diocese is only an administrator characterized by responsibility regarding the diocese's management. Therefore he would not deal directly with any economic or financial problem but rather delegate this task to another cleric.

The Canon leaves it to the bishop to consider if it is necessary to grant aid for someone of poor condition, to be offered backing by the parish or from the Church's funds. In the early periods the "property of the Church was also called the fortune of the poor, because along with the salvation of souls, the main concern of the Church was to drive away the suffering of the deprived and ensure human living conditions for all believers, even of the poor among the ones who did not believe. This was always the concern of the Church especially when the suffering of the poor got worse" (Floca, 2005:31)

*The 41<sup>st</sup> Apostolic Canon* requires the bishop to define his own wealth from the one of the the diocese he leads (Floca, 2005:33).

The destination of funds and the maintenance of the Church's property were allotted to the Church, the service staff and also having social-humanitarian purposes.

*The 59<sup>th</sup> Apostolic Canon*, also, states that the resources of the Church are sacred and it is not allowed to anyone their appropriation for personal benefit. The Church has always had a well-organized social welfare activity (Floca, 2005:41).

*The Apostolic Canons 72 and 73* indicate a barrier to stealing the sacred. The sacred belongings of the Church are aimed to serve the public divine worship.

## **2.2. The canons of the ecumenical councils**

Canon 17 of *the First Ecumenical Council of Nicaea* prohibits those who are part of the church to practice interest or usury. Therefore, among funding sources, the Church did not have the possibility of promoting the loan with interest (Floca, 2005:67).

Canon 2 of *the Fourth Ecumenical Council of Chalcedon* states that the administrator of the Episcopal wealth would be the treasurer who is not to be granted this position by him offering money in order to achieve this (Floca, 2005:86).

Canon 3 of *the Fourth Ecumenical Council of Chalcedon* allows those of the clergy to care for the well-being of the social institutions that are in the care and supervision of the Church (Floca, 2005:87).

Canon 22 of *the Fourth Ecumenical Council of Chalcedon* helps identify another possibility for the establishment of ecclesiastical heritage. Thus, the bishops' inheritance remained in the care of the Church and also to their legal successors (Floca, 2005:98). The person put in charge of this was the treasurer, according to Canon 26 of *the Fourth Ecumenical Council of Chalcedon* (Floca, 2005:100).

Canon 9 of *the Sixth Ecumenical Council of Constantinople* prohibits as funding source for the clergy and the Church to register revenues that come from "taverns or bars which trade alcohol" (Floca, 2005:120). Also, Canon 9 of *the Sixth Ecumenical Council of Constantinople*, sets a restraint – for the Church and clergy – from registering revenues coming from loans or interest.

Canon 97 of *the Sixth Ecumenical Council of Constantinople* established the right of religious authorities to dispose of buildings, real estate, which they administer (Floca, 2005:176).

Canon 4 and 5 of *the Seventh Ecumenical Council of Nicaea* condemns the gain of dishonest financial revenue in the case of the heads of the Church (Floca, 2005:183).

Canon 11 of *the Seventh Ecumenical Council of Nicaea* states the need for appointing Church treasurers and for the right of devolution. The right of devolution indicates "high Church authority intervention in the competence of the Church authorities lower down the hierarchy" (Floca, 2005:189) in many cases explicitly provided by the ecumenical law by which church authorities lower down the hierarchy refuse to perform their tasks. Among these tasks there is also to be found the institution of the treasurer.

Canon 12 of *the Seventh Ecumenical Council of Nicaea* states general rules on the estrangement of church property. The sale of church property by worldly rulers is forbidden. In case a need requires it, the Church's real estate may be sold only to clerics who perform agricultural activity (Floca, 2005:191).

The church disposed of many sanctuaries, establishments that were designed to promote the ecclesiastical activity. It is forbidden by canon 13 of *the Seventh Ecumenical Council of Nicaea* as the real estate should not be used for other purposes than established by the Church.

Canon 19 of *the Seventh Ecumenical Council of Nicaea* provides as general source of the Church's funding the possessions brought in the monastery by the ones who joined the monastic life (Floca, 2005:195).

## **2.3. The canons of Local Councils**

Canon 15 of *the Local Council of Ancyra* in 314 year states that the possessions of the Church enjoy a particular legal status. Thus, movable goods or real estate y belonging to the Church may be transferred only with the approval of the bishop. If

it were to be alienated, the asset may be claimed by the bishop or retain the sum due to the selling of the respective good confirming this way the the documentation set up by the treasurer (Floca, 2005:209).

*Canons 7 and 8 of the Local synod of Gangra* in the year 340 identify among the funding resources of the Church the altar offerings brought by the parishioners. These offerings were divided up among the ones in need (Floca, 2005:221), after the respective blessing. Particularly important are the rules of the canons 24 and 25 of the Synod of Antioch which distinguish between the belongings of the Church and the personal possessions of the Bishop. Canon 8 of the Council of Gangra against those who, at their will, “divide up among themselves the goods and gifts brought to the church” (Phidas, 2008:73) states that these acts are not to be committed “without the blessing of the bishop” (Phidas, 2008:74).

Canon 24 of *the Local Synod of Antioch* in 341 based on the apostolic canons states that the property of the Church “is entitled to be administered based on the judgment and ruling of the bishop to whom the entire population is entrusted ... [...] nothing should be hidden ...” (Floca, 2005:236). The following canon emphasizes the outstanding duty of the bishop as administrator of the belongings of his diocese. If there should happen that “the administration of the Church was secretly brought to a loss, the respective person would be held accountable before the council of that diocese. And if in another way the bishop or his presbyters would be liable for blame, by appropriating the belongings of the Church, either land or other dealings of the Church, so as to inconvenience the poor and thus cover with slander and disgrace the Church administration, and those who settle this way, these should be called upon and the Holy Synod would decide on the appropriate actions to be taken” (Floca, 2005:237) .

Canon 26 of *the Local Council of Carthage in the year 419* states the way some property of the Church could be sold, ones that are not profitable, as well as the procedure to be applied by the Bishop administrating the property: “if a belonging of the Church does not register revenue and a great need would require it, this is to be dealt with by the one who is the head of that diocese and jointly with a determined number of bishops should decide what there is to be done. Should there arise such great need of the Church that they cannot consult before selling, then the bishop would call neighboring ones to witness, making sure to show the council all circumstances proper to that respective church; if these requirements are not met, the seller will look guilty before God and before the foreign council regarding estrangement of his own dignity” (Floca, 2005:279) .

Canon 34 of the same council provides that the wealth gathered by the clergy accumulate after joining the monastic life belongs to the Church: “bishops, presbyters, deacons or any clergy, who have not possessed anything previously, in case they should be appointed to a position and would purchase land or other estates during their episcopate, these properties should be regarded as God’s belongings, but being admonished, they would deliver them up to the Church. And if anything were to return to their possession, especially in the case of gifts or inheritance from relatives, it would be up to them what to be done with that respective property...” (Floca, 2005:282). The 35<sup>th</sup> Carthaginian Canon puts an end to the abuse against Church property, in case the bishop or the priest would happen to act this way in exercising his position.

*Canon 1 of the local Council of Constantinople in 861* monasteries established that the wealth of the monasteries cannot be passed on to the benefit of individuals.

Professor Floca shows that this canon “regards the abuse on the part of some who, building monasteries and equipping them with wealth, donated these to the church, but further considering themselves as owners and behaving this way, establishing the abbot or even selling the property” (Floca, 2005:337).

*Canon 2 of the Local Council of Constantinople in 861* explains how to regard the poverty vote, thus in agreement with Novell 123 of Emperor Justinian if the situation is as such that the monk has children, the wealth due to the latter will be provided and the share of the monk will be given to the monastery (Floca, 2005:341).

### **3. Statutory provisions**

*The Status for the organization and functioning of the Romanian Orthodox Church* has some amendments regarding the succession rights of bishops and monks. Thus, art. 192 states that the Dioceses have a calling on all goods of succession of their bishops. Similarly, art. 193 refers to the belongings of monks and nuns brought with them or donated to the monastery upon their entry into the monastic life, as well as those acquired in any way while living in the monastery. They will totally remain within the monastery they belong to. They may not be subject to further claims. Regarding the retired bishops, the Holy Synod will govern their rights under the statutory and regulatory provisions of the Church as observed in art 194 of the *Status on the organization and functioning of the Romanian Orthodox Church*. Thus, we note that the dioceses have exclusive rights as legal heirs of the bishops' wealth. In the case of a testament, the succession, which is rightfully of the diocese, is materialized in half of the decujus patrimonial. Thus the Church becomes – through the diocese – the only legal heir of the bishops, removing by civil law the legal heirs that might distinguish themselves as having inheritance vocation (Harosa, 2011: 327-328).

Article 41 para. (1) of the *Status regarding the organization and functioning of the Romanian Orthodox Church* states that “the Patriarchate, Archbishops, Bishops, vicariate, deanery, convent and parish are legal entities of private law and public interest”. The listed legal entities, “are entitled to two single tax registration codes, both for the economic and for the non-profit activity”, according to art. 41 paragraph (2).

As one author notes, “the organization and administration of ecclesiastical property of the ROC and ROC Statute provide that the canonical means of acquiring wealth can only be allotted to ecclesiastical legal entities of public utility within the Church, identified by art. 41 para. (2) in relation to art. 40 of the Statute of the Romanian Orthodox Church, in order to request the parishioners various contributions, as well as various ways of acquiring property through purchase, inheritance or pious will. For the most part, the Orthodox canonic law makes reference to the Romanian civil law, reminiscent of liaisons between the oriental religious right with the rules of the state.” (Harosa, 2011:260)

In accordance with art. 41 of the Status, art. 191-193 refer to the church expenditure and state aid. Thus, art. 191 of the *Status regarding the organization and functioning of the Romanian Orthodox Church* states, “expenditures for maintenance and operation of facilities for worship, as well as for repairs and new constructions, will be covered by the voluntary contributions of the parishioners, from religious establishments' revenues derived from their own activities and contributions from the

state budget, from the local government authorities and other institutions, according to the law". According to the article, we identify the following sources of funding:

- voluntary contributions of the parishioners;
- revenues by church entities from their own activities;
- contributions from the state budget;
- contributions from the local government budget;
- contributions from other institutions' budget.

Regarding the right of the Church to receive contributions from parishioners, it has its origins in the "ecclesiology of the communion, which allows concrete contributions to church authorities from parishioners, whenever necessary, as in these cases, any gift from the parishioners as well as any tax is a sign of the communion with the Church and is manifested in the service of the ecclesial community" (Harosa, 2011: 267). Thus, the citizen who expressed adherence to a religion the support shown to the respective cult becomes both a right and an obligation.

### Conclusions

Before the year 313, the Christian religion was forbidden. In these circumstances, the Church could increase assets under disguised contracts of sale, donations, wills or other means which were under the right of individual property and not of the Church as a recognized legal entity. Only starting with the Edict of Milan in 313, the Church was granted the opportunity of becoming the subject of civil rights and obligations.

From the above we can say that the funding sources or the path "by which the goods become in time Church property, may be governed by natural law, the canonic law, the civil law (civil law canonization) or mixed, or may be of origin (occupation, accession or incorporation, the prescription) or derivatives (acts of disposal of intervivos free title, mortis causa, legal or testamentary succession, contracts, legal acts, mergers, spin-offs and extinctions of legal entities, etc) as well as public law (taxes ) or private law" (Harosa 2011: 260).

The Church understands the value of property as a means by which the parishioners should enjoy its appreciation by running religious assistance which is not cold or impersonal, but warm, having a deep philanthropic character.

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## CIVIL LIABILITY OF DOCTORS AND THEIR INSURANCE (MALPRACTICE)

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**Abstract:** *Malpractice insurance of medical staff is probably the oldest professional liability insurance underwritten in the insurance market in Romania. The aim of our research is to theoretically examine in a qualitative inquiry the usefulness of insurance completion by the practitioners from the Romanian health system at both state and private, in order to improve a best practice medical insurance. The medical profession is practiced in Romania under the Code of Medical Ethics 30 March 2012 prepared in code that complies with international standards contained in the Geneva Declaration of 1948, as amended by the World Medical Association and the International Code of Medical Ethics. The forms of medical liability are: disciplinary, administrative, civil and criminal and only the civil liability can be taken into insurance because only it meets the conditions of insurability. Once we explain in general and the insurance liability in particular we show articles of the Romanian Civil Code which establishes the obligation the one that caused an injury to a third person for the repair or indemnify and conditions provided by the Civil Code as an act to be considered liability. Then we refer to situations where the patient may be damaged through the fault of the doctor or the doctor unit operates. The object of malpractice insurance is loss of money that the insured would have to pay a patient whom he caused injury as a result of acts or deeds of negligence committed to, during and in relation to professional activity. Risks taken in the insurance are personal injury, illness or death of the patient and / or moral damages. Regarding the excluded risks we have presented an overview of the more common contracts underwritten by Romanian insurance companies. We show the way of underwriting, the insured sums of the standard insurance and the additional one which subscribes moral damages, to companies in Romania agreed by bodies which organize and supervise the Romanian medical system. The current procedure for determining the guilt of a doctor and his patient complained of the amount of damages is a long and difficult. The procedure for determining the guilt of a doctor reported by his patient and the amount of compensation is a long and arduous one. In conclusions we have shown that along with the reform and reorganization of the Romanian medical system, the civil liability insurance of the medical staff, the way of contracting, the way of establishing the guilt of the applicant and the amount of compensation need to be reformed.*

**Keywords:** *doctors, liability insurance, malpractice, indemnity, compensation.*

**JEL Classification:** *G22, I14, I19*

## 1. Introduction

Any healthy person is exposed to the risk of injury or illness and being treated by a doctor in a medical facility. Every person hopes the service he will receive will be one of a good quality and will go home healthy. But unfortunately, doctors as other professionals, there are persons better or lesser prepared. Even the best trained can have a bad day and the case to be a medical failure.

The noble profession of doctor, practiced from ancient times, certainly under different names is done in order to protect the physical and mental health of human beings (Article 1 of the Code of Medical Ethics 30 March 2012). The professional act and all the work the doctor will perform without any discrimination based on age, sex, race, ethnicity, religion, nationality, social status, political ideology, or for any other reason, including the state of health or patient's chances of recovery (Article 2 of the Code of ethics).

The new medical ethics code developed by the College of Physicians from Romania on 30 March 2012 and published in Official Gazette No. 298 of May 7, 2012 comply with international standards contained in the Geneva Declaration of 1948, as amended by the World Medical Association International Code of Ethics and medical.

## 2. Short History and Malpractice in Other Countries

In terms of malpractice history it must be said that the oldest malpractice case described in history took place in 1375, in the United Kingdom (Văduva, 2010) at Royal Court John Cavendish. Agnes of Stretton has broken her hand and turned to Dr. John Swarlord for care and medical treatment. Because after a few days the hand had not healed, Mrs. De Stretton turned to another doctor who told her that Dr. John Cavendish had treated her incorrect, the patient taking action and suing first doctor who treated her. The process had been canceled due to a technical error.

In the United States, the first case of malpractice occurred in Connecticut, before the American Revolution, 1775-1776. Mrs. Cross had a problem with one of the breasts and consulted Dr. Guthery for diagnosis and treatment. Diagnosis was scrofula and amputation of the breast was recommended. After the patient's consent, the breast was amputated but after surgery the patient had a hemorrhage and died. Dr. Guthery expressed sympathy to the husband but after a few days sent him the bill. The husband, angry, sued, and in the process, the doctor had to pay substantial compensation (*Medical malpractice*, 2013).

Over the years, patients' demands have reached higher, so that more and more patients are suing medical staff, especially doctors who treated during illness or accidents, requiring substantial benefits. The amount of compensation that patients receive varies according to the legislation of the country in which the patient was treated.

Regarding the legislation of European states it should be noted that most of them do not have special legislation for malpractice cases. Instead of punishing medical professionals that were wrong, preferring compensation for the traumatized patient. In most states the provisions of the Civil Code and the Penal Code are applied (Perețianu, 2009).

In Germany, malpractice insurance is not mandatory in most provinces. But the majority of those who practice medicine prefer to ensure because insurance premiums cover the risk of paying compensation to a patient dissatisfied with the services received. Every medical practitioner ensures the sum he considers

abundant to indemnify the dissatisfied patients. It should be noted that allowances granted are only measurable (sick leave, prosthetic devices, etc.), not related allowances suffering, pain, or to reward a person sentenced to confinement due to infirmity caused by medical error - moral damages.

Netherlands was the first country where medical special provisions have been introduced in the Civil Code. This solution was necessary because health system characteristics such as the need to keep medical records, consent is requested, using patient information in research.

In the U.S., the country with the most cases of malpractice in the world, 10 times more than in Canada (*Medical malpractice*, 2013), healthcare providers, healthcare professionals and medical facilities are not required to enter professional indemnity insurance but nobody could afford to practice without malpractice insurance because of frequent complaints and the high volume of claims required by those who consider themselves injured by medical acts.

In New Zealand, there is no professional liability insurance, because there is also law that employers are required to compensate employees who are injured, including medical malpractice. Therefore there are no compensation processes requesting medical institutions or doctors (Perețianu, 2009).

In Romania, the first time reminiscent of professional liability insurance for healthcare in Law 145/1997 on social health insurance, which in art. 41 was stated: "The health insurance funds are obliged to organize a system of civil liability for providers of the security system. The provision was ambiguous and was never implemented."

Above-mentioned law was replaced by Ordinance 150/2002 on the provision and operation of the social health insurance system, and they requested the doctors to practice freedom of contract concluded with Health Insurance to provide liability insurance professional indemnity.

Currently under Law 95/2006 - Title XII, physicians exercise their profession based on the certificate to the College of Physicians of Romania approved annually based liability insurance for mistakes in work, valid for the year.

### **3. Medical Personnel and Civil Liability**

According to Article 642 of Law 65/2006 in the name of health care are included: doctors, dentists, pharmacists, nurses and midwives. We will deal only with the responsibility of the accused doctors when a patient was not treated properly and calls for material and moral damages.

As we have shown the medical profession is one of the oldest in the world. Although he had many names: Doctor, medicine man, healer, the purpose of their activities was defending physical and mental health of community members in which they worked.

Etymology of the word "doctor" is in ancient Greece. Archiatros or archiater (after latinization), mean person considered primary healer or one who deals with prevention, recognition (diagnosis), treatment and follow-up of diseases and accidents.

"A medical career begins long before they enter a college field, somewhere in childhood told a reputed surgeon. Once you begin to understand which way to go through what steps to climb and that you learn all your life, you feel like giving up but then true professionals are sieved. "

Although the steps of a medical profession are numerous, from a fresh faculty graduate to the primary specialist in a branch of medicine, not all have the same

degree of training. The degree of training is an essential condition to achieve performance. Skills is vital, but it is, in any case, the only ingredient for success. Equally important are solid preparation, compassion, correct reasoning, communication skills, clinical sense, theoretical knowledge and exemplary professional conduct to successfully meet the needs of patients.

Successes and failures in treating patients can be had by those Well and less trained. Perhaps the better prepared have many numerous successes and the others failures. Liability in case of failures have each of those who treated the case. As shown in our work on ensuring civil servants in art. 75 of Law no 188/1999 on the Statute of civil servants, and now the doctors are public servants, stated that the violation by the guilt of their duties and the rules of professional conduct and civic prescribed by law and constitutes a disciplinary offense and attracts liability (disciplinary, administrative, civil and criminal), as appropriate. Forms of liability does not exclude each other, if the deed meets the various forms of liability, they may apply simultaneously. Therefore, the doctor may be sanctioned with specific forms of accountability measures.

We define the forms liability (disciplinary, administrative, civil and criminal) of the doctor because we want to show which of them may be subject to insurance.

- *Disciplinary* - are deviations from the Code of Medical Deontology / 30.03.2012. Acts of misconduct are reviewed by the College of Physicians and disciplinary sanctions are applied (reprimand, warning, suspension of work, sales employment contract);
- *Administration* - are deviations from the Labour Code. Is instrumented by the employer (the Board of Directors of the hospital, office, clinic, etc.). Penalties are administrative (Law 95/2006 are called all disciplinary related internal regulations of the employer) and consist of demotions, reductions in salary, moving to another department, etc. (Article 263 of Law 95/2006);
- *Criminal* - when there is injury and / or death. Is determined by the courts under the Criminal Code and instrumented by the Prosecution;
- *Civil* - is established and dealt with by the courts under the Civil Code and the penalties are pecuniary damages awarded to the injured.

None of the three forms of liability set could not be taken in an insurance contract because the risks to be insured must meet several insurability criteria (Ciurel, 2011):

- to be calculated, can be probabilistically calculated,
- cannot be avoided,
- they may not be acknowledged,
- be bearable,
- to be compensatory, that insurer to compensate the financial loss resulting from their production,
- Be consistent with the regulations in force, moral and insurer profitability.

The first two forms of legal liability (disciplinary and managers) not meet the conditions a, b and c and criminal liability does not meet the last condition of insurability, that is inconsistent with applicable law, the moral and social ethics.

We left the medical professional liability for last, because it may be subject to an insurance contract, as we will show.

#### **4. Civil Liability of Medical Staff and Its Insurance**

The fundamental role of insurance is to protect the financial compensation of the losses caused by the occurrence of a risk, compensation provided from the insurance fund established by adding and fructification of the insurer, the insurance premium that the policyholders pay (Pintea, 2011).

Liability insurance (Ciurel, 2011) covers all sums which the insured is obligated to pay by law for property damage, moral and / or injury caused by him to a third party. In most contracts court fees are added. The interest of the insurance is to avoid the lowering of the insured patrimony as a result of his civil liability to injured persons.

In a terminological approach civil liability is a legal obligation that the person who caused an injury to another person shall repair the damage to the product (Bistriceanu, 2001) and under the obligation of responsible for causing injury to the repair from the provisions of the new Civil Code or rather its two key institutions namely crime and qvasicrime.

In matters of tort, the new Civil Code governing the civil liability of those who harm others injured, giving art. 1349, that "every person has the duty to respect the rules of conduct imposed by law or local custom and do not affect by actions or inactions of its rights or legitimate interests of others, who with discretion, violates this duty responsible for all damages, being obliged to fully compensate them. "Art 1350, states that" the borrower is obliged to repair the pecuniary damage caused to the creditor contractual nonperformance, defective performance or delay in benefits to which he is indebted under a valid contract ended "

Articles 1357 and 1359 of the same Code Civil concerning liability for his own deed, provide that "he who causes harm to another by an unlawful act committed with guilt, is obliged to pay compensation" and "illicit offender is obliged to repair the damage and when it is caused because of the damage of another's interest if the interest is legitimate, serious, and how that manifests itself, creates the appearance of a subjective right"

Theory of civil law specifies that there are two types of liability: tort and contract, their common element consisting in that both are based on the idea of repairing damage caused to another by an unlawful act.

Tort involves a person's obligation to repair the damage caused to another through an extra contractual unlawful act or the damage for which he is called by law to answer for.

Contractual civil liability of a debtor assumes duty obligations arising from a contract to repair the damage caused to the creditor or by non-performance due to delay its execution or improper execution of them.

Since between the two forms of liability there are no major differences, the legal classification of the liability situations both tort and contract envisages the cumulative meeting of the three following target conditions:

- contractual unlawful act consisting of non-contractual benefits owed by the debtor;
- damage caused to the creditor;
- the causal link between the wrongful act and the injury to third persons

Proof of damage caused to the creditor (the patient) or the causal link between the wrongful act and the injury must be demonstrated by the third person who has suffered damage. Proof of illegal act (if tort) or non-enforcement, inadequate or delayed execution of contractual obligations (in case of contractual liability), all of the

damage back to the person who suffered the damage, using the bodies granting sanctions - College of Physicians and courts of Romania.

The doctor must feel safe when practicing, his whole capacity should focus on the medical act and not be altered by the fear of error. To achieve this goal the notion of malpractice and the way they protect themselves from the error repercussions through professional insurance liability-malpractice must be understood.

Etymologically, the word malpractice, consists of the Latin word "mal", "malus" - evil and word of Greek origin "praxis" - practice. Therefore the meaning of malpractice is bad practice, poor practice, the wrongly practice of medicine.

Definition of malpractice law is quite specific meaning. Malpractice is the professional error committed in the exercise of the medical act or medical-pharmaceutical, generating harm to the patient involving civil liability of medical personnel and healthcare provider, healthcare and pharmaceuticals (Art. 642). Basically, Law No. 95 of 14 April 2006 on healthcare reform, (published in Official Gazette 372 of 28 April 2006) with its numerous amendments provides that medical personnel, including doctors, dentists, pharmacists, nurses and midwives providing care patient liability for damages caused by error. The error may appear in the prevention, diagnosis or treatment and causes of error are cited by law: negligence, carelessness, and insufficient medical knowledge in the profession through individual acts in the framework of the prevention, diagnosis or treatment.

Also, health care and civil liability for damages of error arising from non-compliance on the patient's informed consent and mandatory medical assistance when they exceed the limits of its competence, except for emergency cases where competent medical personnel is not available.

It should be noted that not only the doctor's unlawful act may cause the patient injury. There are clearly situations specified in the law, which may cause harm to patients and the doctor is not responsible. These are the following:

- when they are due to working conditions, insufficient endowment equipment diagnosis and treatment of nosocomial infections, adverse effects, complications and risks generally accepted methods of investigation and treatment, addictions hidden sanitary materials, medical equipment and devices, substances medical and sanitary use;
- He acts in good faith in an emergency, respecting the granted competence.

For damage to the patients by these circumstances, the medical unit in which the physician works will be responsible and will have to compensate the injured patient with appropriate monetary compensation.

Like any profession, medicine is carried out under the control of a professional body (the College of Physicians, National Health Insurance) to which the doctor's membership is mandatory. When the doctor as a professional, making a gesture unintentionally detrimental to someone, the state provides the citizens it protects that injured patient will not remain uncompensated.

Professional liability insurance (malpractice) addresses individuals possessing the degree of doctor issued by a medical university institution in Romania or abroad, equated by law and authorized by the Ministry of Health, according to medical staff status. It also can provide other health professionals: nurses, lab technicians and other professionals with specialized secondary education, and health care facilities: hospitals, maternity hospitals, clinics, dispensaries, nursing homes, private clinics and so on, on behalf and for their servants.

The object of professional liability insurance for doctors and health professionals is the financial loss that the insured would have to bear whenever a patient caused his injury as a result of acts or acts committed by negligence to the during and in relation to professional activity, within the jurisdiction conferred by permit free circulation, for which he is liable under special laws, rules and the profession, the rules of ethical conduct and professional ethics, and is required to repair.

Damage may consist of personal injury, illness or death of the patient situations where the patient receives an allowance and / or moral damage, the amount of all benefits and compensation as determined by the courts. There are cases expressly provided (specific exclusions) in most of the companies that underwrite such insurance, it is not possible to award damages, namely:

- damages arising from plastic surgery / cosmetic, unless it is provided only as a necessity of correcting the consequences of an accident and / or congenital deformities;
- treatments / services provided to cause pregnancy, surgery to produce sterility, sex change operations, in-vitro fertilization;
- personal injury (including emotional distress or psychological trauma or phobia) damage that is caused or claim to be caused or are in any way related to AIDS or hepatitis;
- treatments (including medication and diet) to reduce weight;
- manipulation / genetic damage;
- Carried out by dental general anesthesia or any work done under general anesthesia unless they occur in special clinics with specialized assistance.

Compensation by insurance companies in Romania may represent, as appropriate:

- costs of the proceedings made by the applicant for legal formalities in order to oblige the insured to pay compensation if the insured was required to pay their final and irrevocable court judgment;
- costs of the proceedings made by the insured in the lawsuit if he was forced to compensation by the final and irrevocable court decision, including where prosecution is not driven costs and remain civil action in criminal courts;
- costs and expenses incurred by the insured, the insurer's written consent and for investigations, tests, surveys, and so on;
- Value to pay moral damages which the insured was bound by the final court decision.

Premiums paid for malpractice insurance (liability in case of medical mistakes) are tax deductible. Maximum size depends on the amount and type of compensation provided under the contract (property damage, injury and possibly moral damages) In recent years the College of Physicians of Romania and Health Insurance have signed agreements with leading insurance companies, only contracts with such companies being agreed by the bodies mentioned above.

According to the College of Physicians of Romania for 2013 professional liability insurance medical insurance cover ends on the following:

- General practice / family medicine - 15,000 euro
- Laboratory medical specialties -20,000 euro
- Clinical medical specialties - 37,000 euro
- Medical and surgical specialties - 62,000 euro

Amounts provided are related to damages and personal injuries, known by most insurers at standard conditions. Insurance premiums vary by subscribing insurance company and the insured specialty.

Those who want the insurer to pay injured patients as potential moral damages, most insurance companies are limited to a certain maximum amount secured more than € 20,000, an amount too small to moral damages set by the court of malpractice cases in Romania. The first additional insurance coverage related to underwriting and moral damages is 4-5 times higher than corresponding insurance premium standard.

Prerequisite for a company to pay damages for the harm in case of poor medical practice is to fit the object of insurance / risk insured and the injured person to prove entitlement to compensation. The hardest thing to prove is that the doctor was wrong and that the patient's right. Medical negligence is established by a committee for monitoring and professional malpractice cases. Between the years 2006-2011 there was a total of 725 notified cases of malpractice (Report Romania/2011 Medical College) and a total of 916 doctors were accused of malpractice, of whom only 198 were sanctioned and punished and only 11 have been prohibited from practicing medicine. These figures do not indicate the number of cases that were not reported, which could reach several thousand thanks to the difficult system of establishing guilt of the applicants and the amount of compensation. In Table 1, we show how the number of doctors accused of the sanctioned and the number of final decisions issued by the disciplinary committee of the Medical College evolved, and in Figure 1 we show graphically the same.

Table 1- *Evolution of the number of reported doctors, the sanctioned and the decisions of the CSD in the 2006-2011 period*

years	2006	2007	2008	2009	2010	2011
Reported doctors	112	135	171	157	154	187
Sanctioned doctors	19	16	51	48	38	26
Nr of CSD decisions	123	118	148	95	106	135

Source: Report Medical College of Romania / 2011

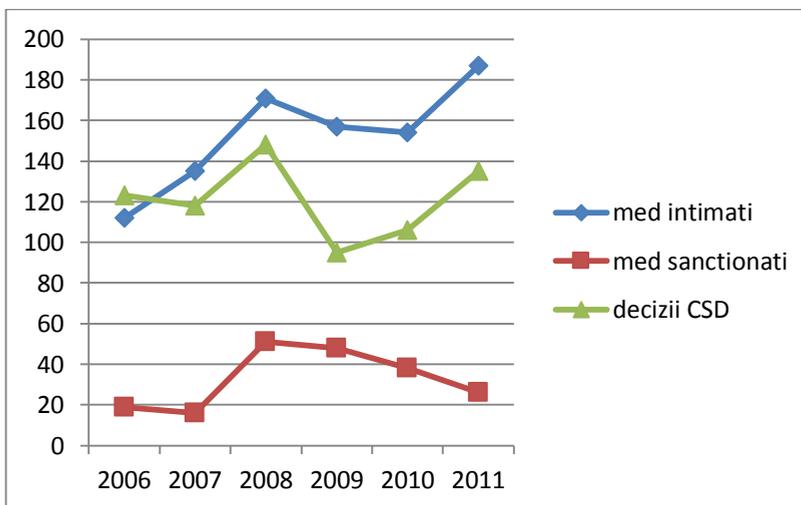


Figure 1: *Graphic evolution of the number of doctors reported, sanctioned and decisions of the CSD in the period 2006-2011*

The Commission will appoint malpractice before a panel of experts and the review will determine whether or not it is a malpractice case and will communicate its decision to all interested parties, including the insurer. The size of compensation is determined only by the courts of Romania. The period of establishing the degree of guilt of a doctor accused of malpractice is very long, to which the trial period known to process in Romania are added, known to be very long. So from bringing charges of malpractice and to compensate the injured it reaches a period of 5-6 years.

## 5. Conclusions

Romanian health system is in an unacceptably long crisis. This is manifested in all sectors: financial, material and human resources but perhaps the most difficult is the organizational.

Given that more and more patients dissatisfied with the services they received in medical institutions in Romania addressed the Disciplinary Board of the Medical College to claim malpractice cases and to filing the complaint and to collect damages for an extended period of time passes conclude that along with the reform and reorganization of the Romanian medical system needs to be reformed and liability insurance to medical personnel, the way of contracting, the way of establishing the guilt of the applicant and the amount of compensation.

In terms of how liability insurance must be reformed we conclude that it should include more types of insurance cover for standard ensuring every medical specialty and different types of insurance cover for any compensation for moral damages, the potential provided to able to choose the subscription according to any damages which it believes will be required next year insurance and insurance premium they can afford to pay.

Regarding the malpractice insurance we will show that it should be contracted with all insurance companies licensed to underwrite risks in the Romanian market, not just those approved by certain protocols and due to competition between insurance companies insurance premiums would decrease more.

Perhaps the most important change would be made to establish the guilt of the applicant and the amount of damages awarded. College of Physicians territorial area in which the complaint was made to determine whether the applicant is guilty in a fixed period determined malpractice law and then the amount of compensation to be established by direct negotiation between the insurer of the guilty doctor and the harmed patient.

Only when malpractice insurance will work in a reformed health system performance in the presented form or close to it will be a reliable aid to medical personnel in Romania.

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## INDIRECT TAXES ÎN EUROPEAN UNION

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**Abstract:** *The main objective of our research is to make extensive analysis on the budgets of EU member states in order to emphasize the main trends within the period 2000-2011. We are using common measures such as: data in millions of euro, percentage of GDP, fixed base index, chain based index, percentage of total revenues or total taxes. Through this study case, we aim to create a good presentation of the EU. State members, an image of the percentage modification related to a base year, achieved by the main budgetary components from year to year. On our case study we are focusing only in indirect taxes since these are, for many EU countries the main budgetary revenues. Another important reason for focusing on indirect taxations is the fact that most countries during the financial crises consider readjusting of these taxes on of the main tool to adapt to the lack of public resources. Our research is based on data extracted from EUROSTAT and our calculation and compilations. Our working hypothesis is that despite huge differences in tax policy among all 27 European countries there are some common trends and Romanian tax policy must adapt and must follow them. Another important element is that trends in fiscal policy may vary due different elements such as: level of development, social policy issues, systems of financing different public expenditures, number and structure of populations, regional and local objectives and many others. The VAT, the main important indirect tax is extensively annualized since most of the trends of taxation are dictated by the trends of VAT. Romania is a special example, not the only one., where VAT has significance importance for budgetary revenues and was the main element of fiscal adjustments during the financial crisis.*

**Keywords:** *fiscal policy; indirect taxes, VAT, European Union, fiscal harmonization.*

**JEL classification:** *E62; G28; H20; O52.*

### 1. Introduction

The purpose of our research is to analyze the budgets of the E.U. countries compared to the budgets of Romania during 1999-2010 period, highlighting the evolution of the budgetary incomes especially indirect taxes. After studying the literature regarding the budgets of the E.U. member states we had done the analysis of their budgets. Our study also aims at analyzing the main trends and budgets of

the E.U. states, which are done through the calculation of some indices, reported both income and expenditure of the extracted data: indices with fixed base, chain-based indices, minimum, maximum, mean values recorded at the level of states, weights and values of total GDP. The data needed for analysis were processed from the European Union website (<http://epp.eurostat.cec.eu.int>), in compliance with the standard classification. These data were extracted and processed in March 2012. Our analysis is according with the European Union standards ESA. Our approach begins with the analysis of the most important categories of taxes, the tax on production and imports (D2). ESA standard define this kind of tax who is achieved through cash payments or in nature, that are collected by the public institution or by the E.U. institutions, in what concerns the production and the import of goods and services, workforce or land owning or other goods utilized in the process of production. These taxes are payable without taking into account if there is a profit or not,

The taxes on production and imports include the following categories: Taxes on products and Other taxes on production. The category taxes on products are including: V.A.T., taxes on products excluding V.A.T. and the import duties on products;

Taxes on products include those taxes paid per unit of good or service produced or transacted. The tax may be formed from a sum of money paid per unit of a good or service or may be calculated ad valorem as a percentage of price per unit or value of goods and services produced or traded.

The Value Added Tax is a type of tax that falls on the goods or services collected in stages by enterprises and ultimately borne entirely by consumers.

The taxes and duties on imports excluding VAT comprise compulsory payments levied by general government or the EU institutions on imported goods, excluding V.A.T., in order to allow free movement within the economy and the services provided by unit's resident and resident units to buyers.

The taxes on products excluding VAT and import duties (D214) consist of taxes on goods and services that become payable as a result of production, export, sale, transfer, leasing or delivery of such goods or services, or from the use of these goods or services for own consumption or own capital formation.

Other taxes on production consist of all taxes that enterprises incur as a result of employment in production, regardless of the quantity or value of goods or services produced or sold. These types of taxes can be paid on land, fixed assets or labor employed in production or in certain activities or transactions.

D2 Taxes on production and imports

D21 Taxes on products

D211 Value added type taxes (VAT)

D212 Taxes and duties on imports excluding VAT; D2121 Import duties:

D2122 Taxes on imports excluding VAT and import duties; D2122A Levies on imported agricultural products; D2122B Monetary compensatory amounts on imports; D2122C Excise duties; D2122D General sales taxes; D2122E Taxes on specific services; D2122F Profits of import monopolies;

D214 Taxes on products, except VAT and import taxes; D214A Excise duties and consumption taxes; D214B Stamp taxes; D214C Taxes on financial and capital transactions; D214D Car registration taxes; D214E Taxes on entertainment; D214F Taxes on lotteries, gambling and betting; D214G Taxes on insurance premiums; D214H Other taxes on specific

services; D214I General sales or turnover taxes; D214J Profits of fiscal monopolies; D214K Export duties and monetary compensatory amounts on exports; D214L Other taxes on products.

D29 Other taxes on production; D29A Taxes on land, buildings and other structures; D29B Taxes on the use of fixed assets; D29C Total wage bill and payroll taxes; D29D Taxes on international transactions; D29E Business and professional licenses; D29F Taxes on pollution; D29G Under-compensation of VAT (flat rate system); D29H Other taxes on production.

## 2. Taxes on production and imports

As we can observe, the indirect taxes are represented at the E.U. 27 budgetary classification level by the D2 code. The maximum amount of the indirect tax revenue in the E.U. 27 was 1,666,408.9 million Euros in 2007. The minimal amount of the budget revenues (from this tax) in the E.U. 27 was recorded in 1999 and was 1,174,391 million. Regarding the average, we can say that it was 1,426,687.82 million Euros in the period under review for E.U. 27. The country that recorded the maximum values of the indirect taxes was Germany, which recorded a maximum of 305.460.00 million Euros in 2007. The main reason for this maximum was recorded in indirect taxes, in Germany, was due to the increasing of the V.A.T. rate from 16% to 19%.

<b>Table 1</b>			
Indirect taxes, state ranking, mil. Euros			
Maximum values		Minimum values	
Germany	305.460 (2007)	Malta	454 (1999)
France	288.571 (2008)	Estonia	627 (1999)
England	256.471 (2007)	Latvia	933 (1999)
Italy	225.928 (2007)	Lithuania	1405 (1999)
Spain	122.779 (2007)	Bulgaria	1.663 (1999)
Source: Personal processing of the data from the Eurostat			

Table (Indirect taxes, state ranking) shows the minimum and the maximum values of the European Union. All the maximum values are recorded in 2007, except France (2008) by the old European Union member countries, while minimum values are found in countries that joined recently the European Union. France also has quite high values of the maximum indirect tax revenue in quantum of 288.571 million Euros in 2008. The main cause of this increase was the lowering of the indirect tax rates leading to a high degree of their collection. Britain also reached high values of the indirect tax revenue in this period, namely a maximum of 256,470.5 million Euros in

2007. The main cause of this increase was due to a higher fiscal pressure of the indirect taxes from 37.6% to 38.3%.

Italy also recorded in 2007, in this area, a maximum of 225.471 million Euros. Germany in 2007 had a maximum of 305,460 million Euros from indirect taxes. In all these countries where there have been significant increases in the indirect tax revenue we could observe an increase over the period, the maximum being reached in 2007. Thus, compared to 1999 in Germany was an increase from 1999 to 2007 of 1.26 times, 1.31 times in France, in the U.K. of 1.38 times and 1.34 times in Italy. In Estonia there was also a considerable increase of 3.36 times. As we can remark, the average percentage of the indirect tax revenues, at the E.U. level, in total incomes, is exactly 29.68%. The highest percentage of the revenues from this tax was almost 49%, and it was registered in Bulgaria (2006).

If in the Nordic countries, the highest indirect tax revenues were recorded, we see that the indirect taxes are exactly the opposite, Finland registering, for example, the minimum of the percentages in total incomes of the indirect taxes. We noted that the maximum percentages of the indirect tax revenue in total income were in Bulgaria. High percentages appear in former communist countries such as Romania, Hungary, Poland, Slovakia and other countries such as Slovenia, Latvia, Ireland, Portugal, and Lithuania.

<b>Table 2</b>		
<b>The minimum and the maximum of the indirect taxes, percentages in total income</b>		
Maximum indirect tax, percents in total income		
Indirect tax:	48,98%	Bulgaria
Minimum indirect tax, percents in total income		
Indirect tax:	24,02%	Finland
Source: Personal processing of the data from the Eurostat		

In Romania, the absolute amounts of revenues from the indirect taxes increased greatly between 1999 and 2007, from 4,114.5 million Euros to 16,379.5 million Euros. Thus, we realized that there was an increasing in the amounts of 3.98 times in 2008 compared to 1999. The trend in the indirect taxes can bring out the base and chain indices analysis. It is noted that in 2005 over 2004, these revenues have increased 1.44 times. It should be noted that the mentioned increase of 1.44 times, the largest increase from one year to another, was registered in the E.U. 27. As you know, Romania is among the countries where the average percentage of the indirect tax revenue in total revenue is 34.11%, compared to 18.07% from the average of the direct tax revenues. In terms of G.D.P. the percentage average of the indirect taxes recorded in Romania, is 11.99%, average close to the percentage average of the

G.D.P. registered in the Netherlands (12.18%), Latvia (13.93%), Lithuania (11.83%), Germany (11.74%), Spain (11.13%).

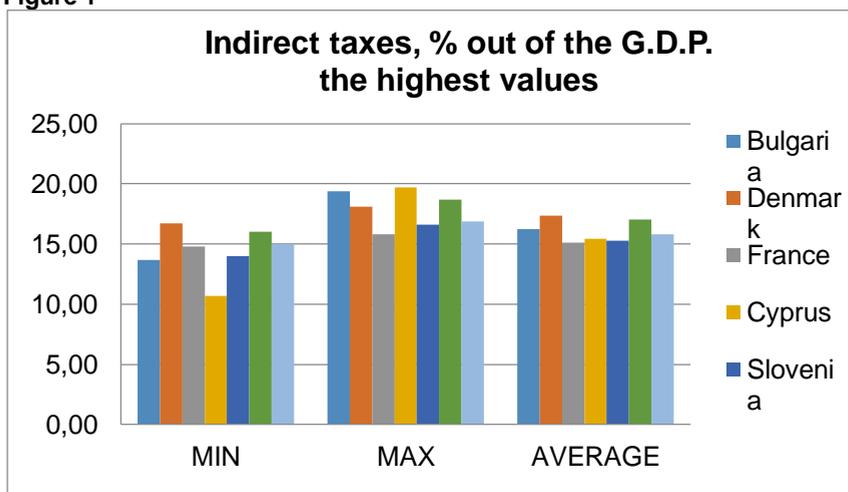
Further, considering the percentage of the G.D.P. of the indirect taxes for all countries analyzed, we find that it varies between 8.80% - 19.70% for the entire period (1999-2007). The maximum percentage in the G.D.P. of indirect taxes was recorded in Bulgaria (19.4% in 2006), and the minimum in Spain (8.8% in 2009). We noted that in Germany, Spain, Italy, Netherlands, England, the maximum percentage in G.D.P. of these taxes had minimum values and the average of the period analyzed had a very close level to the minimum, which suggests that the indirect taxes have been a slow evolution for the entire period considered in this study.

The indirect taxes are divided into taxes on production and other taxes on production.

### 3. Taxes on production

The revenues from the taxes on production represent over 80% of the revenues from taxes on production and imports, with an average share of the total income of 24.70% and an average share in G.D.P. of 10.96% (of the U.E. 27). These revenues, in the U.E. 27 had a maximum value of 1,380,088.2 million Euros in 2007 and a minimum value of 966,185.6 million Euros in 1999. Among the countries that have high levels of incomes from taxes on production, are to be named: Germany, England, France and Italy. This is due to an improvement in services, namely the production of the goods in those countries, so that the amount of revenues from taxes on products increased proportionally with them.

Figure 1



Source: Personal processing of the data from the Eurostat

The taxes on production are divided into: a) value added tax (V.A.T.), b) Taxes on imports excluding V.A.T., c) taxes on production, excluding VAT and customs duties.

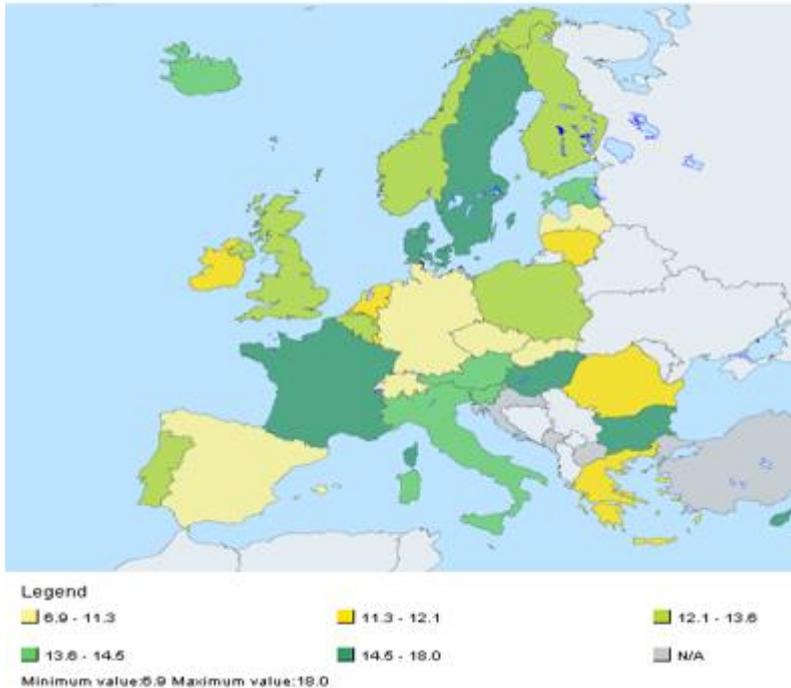
### 4. V.A.T.

The V.A.T. is the most important component of the taxes on production and it represents about half of the taxes on production and imports, accounting for 15.18% of the total revenues, and accounted for 6.73% of E.U. 27 G.D.P. The revenues of the value added tax in the E.U. 27 recorded a maximum of 856,510.1 million in 2007, and the minimum value, 568,410 million, was recorded in 1999. If we analyze the evolution of the income from V.A.T., we can see that these revenues are evolving in the analyzed period from 568,410 million in 1999 to 856,510.1 million in 2007, and then, in 2008, 2009 and 2010, the values registered were below the peak recorded in 2007. The countries with the highest values of V.A.T. revenues are: Germany (178,460 million Euros in 2010), France (134.744 million Euros in 2008), England (131,047.4 million Euros in 2007) and Italy (131,047.4 million Euros in 2007). The lowest values of the V.A.T. revenues in the countries of the E.U. 27, appear in Malta, Latvia, Cyprus, Estonia. From the available data we can see an increase in the V.A.T. revenues in absolute terms in all through 27 countries over the period we analyzed. The share in total revenues of the V.A.T. revenues ranged from 10.97% (Slovenia 1999) and 31.38% (Bulgaria 2006). In 2007, the V.A.T. in England had an increase of more than 1.39 times compared to 1999. In Romania, the total amount of the V.A.T. revenue is between 12.74% in 1999 and 25.03% in 2005, but will decrease to 23.53% in 2007 and then in 2010 to drop to 22.60%. Romania ranks seventh E.U. 27, in terms of total share's average of the V.A.T. revenue in total revenues at a rate of 19.92%. Bulgaria is just ahead of Romania with a share of total V.A.T. revenues of 27.25%, 23.09% Estonia with 23.09%, Ireland 19.99%, 20.61% Cyprus, Latvia 20.96% and Lithuania with 21.73%. Analyzing the share in the G.D.P. of the V.A.T., on all the countries surveyed, we acknowledged that it ranged between 4.8% and 12.4% for the entire analyzed period.

## **5. Taxes on imports**

In what concerns the chapter of taxes and payments on imports excluding VAT, is of less importance in our analysis because they accounted for 3.37% of the total budget and 2.2% from the income tax on production. With respect to these taxes, it should be noted that the taxes on imports excluding V.A.T. had an interesting development in the period 1999-2011. The revenues from this tax were 28.285 million Euros in 1999, after that, they grew up in 2001 to 32,271.2 million, then they decreased in 2002 to 30,700.2 million, in 2003 they increased again to 31.35,9 million, after which they decreased in 2004 to 30,245.2 million and in what concerns the last year we analyzed, in 2010 they reached 29,506.9 million Euros, value similar to that from 2007. We note that their level is low in almost all E.U. countries in the entire analyzed period. Romania has an average of the taxes on imports excluding VAT of 1.86% out of the total revenues during 1999-2010.

**Figure 2**  
**Taxes on production and imports**  
**% of GDP - 2010**  
**General government**



Regarding the section of the taxes on products excluding VAT and customs duties, it is worth noting that they accounted for 8.80% out of the total revenues in the E.U. 27 and other current taxes have accounted for approximately 5%. The revenues from the taxes on products excluding V.A.T. and customs duties have higher values than those mentioned above. This type of incomes recorded an average in the E.U. 27 throughout the analyzed period of 436,129.74 million Euros. The highest value occurred in England (93,947.5 million), Germany, France, Spain and Italy, and the minimum values are registered in Estonia, Malta, Cyprus, Latvia and Luxembourg. Romania has an average of these taxes in quantum of 2768.08 million in the analyzed period. The largest share of the G.D.P., regarding this duty, belongs to Slovenia in 1999 (8.3%) and the lowest proportion in Estonia in 2000 and 2001 (0.1%). The percentage average of the tax revenues on products excluding V.A.T. out of the total incomes in Romania is 10.22%. The percentage average of the G.D.P. of this tax are low, ranging from 0.1% to 8.3%, in the member countries while in Romania, the value recorded as a percentage average from the G.D.P. is 3.57%.

## 6. In conclusion

The maximum amount of the indirect tax revenue in the E.U. 27 was 1,666,408.9 million Euros in 2007. The minimal amount for the E.U. 27 was recorded in 1999 and was 1,174,391 million.

The country that recorded the maximum values of the indirect taxes was Germany, (305.460.00 million Euros in 2007), due to the increasing rate of the V.A.T. from 16% to 19%. All the maximum values on Indirect taxes, are recorded in 2007, except France (2008) by the old European Union member countries

Minimum values on Indirect taxes are found in countries new members of EU. The biggest increases in the period 1999 – 2007 were in: Germany, 1.26 times; 1.31 times in France, in the U.K. 1.38 times and 1.34 times in Italy.

The average share of the indirect tax revenues in total incomes, at the E.U. level, was 29.68%. The highest percentage of the revenues from this tax was almost 49%, and it was registered in Bulgaria (2006). If in the Nordic countries, indirect tax revenues were the lowest. Finland registering, for example, the minimum shares in total incomes of the indirect taxes.

in former communist countries are recorded the maximum shares of the indirect tax revenue in total income: Bulgaria, Romania, Hungary, Poland, Slovakia, Slovenia, Latvia, and Lithuania.

In Romania, the absolute amounts of revenues from the indirect taxes increased greatly between 1999 and 2007, from 4,114.5 million Euros to 16,379.5 million Euros. It should be noted that the mentioned increase of 1.44 times increase, was the biggest registered in the E.U. 27.

In Romania the average percentage of the indirect tax revenue in total revenue is 34.11% (18.07% average of UE). In terms of G.D.P. the percentage average of the indirect taxes recorded in Romania, is 11.99%, average close to the percentage average of the G.D.P. registered in the Netherlands (12.18%), Latvia (13.93%), Lithuania (11.83%), Germany (11.74%), Spain (11.13%).

The maximum percentage in the G.D.P. of indirect taxes was recorded in Bulgaria (19.4% in 2006), and the minimum in Spain (8.8% in 2009)

The revenues from the taxes on production represent over 80% of the revenues from indirect taxes, with an average share of the total income of 24.70% and an average share in G.D.P. of 10.96% (of the U.E. 27). The highest levels are recorded in Germany, England, France and Italy.

The V.A.T. is the most important component of the indirect taxes; it represents about half of the taxes on production and imports, accounting for 15.18% of the total revenues, and accounted for 6.73% of EU 27 GDP. The revenues of the value added tax in the E.U. 27 recorded a maximum of 856,510.1 million in 2007, and the minimum value, 568,410 million(1999). The countries with the highest values of V.A.T. revenues are: Germany (178,460 million Euros in 2010), France (134.744 million Euros in 2008), England (131,047.4 million Euros in 2007) and Italy (131,047.4 million Euros in 2007). The lowest values of the V.A.T. revenues in the countries of the EU27, appear in Malta, Latvia, Cyprus, Estonia.

The share in total revenues of the V.A.T. revenues ranged from 10.97% (Slovenia 1999) and 31.38% (Bulgaria 2006).

In Romania, the total amount of the V.A.T. revenue is between 12.74% (1999) and 25.03% (2005), 23.53% (2007) and then in 2010 to drop to 22.60%.

Regarding the section of the taxes on products excluding VAT and customs duties, it is worth noting that they accounted for 8.80% out of the total revenues in the E.U. 27 and other current taxes have accounted for approximately 5%. The revenues from the taxes on products excluding V.A.T. and customs duties have higher values than those mentioned above.

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## THE INFLUENCES OF CHANGES IN TAX LEGISLATION

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**Abstract:** *Taxation is a fairly important field in the relationship between tax payers and tax authorities, especially given the frequent changes in specific legislation.*

*Legislative changes affect the patrimonial position of the tax payers, but also their behavior, therefore this phenomenon is important to advise those interested and also to analyze the changes resulting from changes in tax legislation.*

*This paper aims to meaningfully present the latest legislative changes and to analyze their influences on tax payers and on budget revenues from taxes subject to change. The research methodology is based on comparison and inference, based on previous analyses for such studies on the tax system.*

*In the literature there are known ways and methods of increasing the tax burden and, based on the variables, in the present paper we will highlight the particular influences on the tax payer's, loaded by weight imposed by the official distribution of the tax burden.*

*The implications of legislative changes in tax matters should be sought in the innermost chord of tax payers and also in the increasingly large and patched pockets of the modern state.*

*In the first place, we will point out the implications on changing tax procedures, in terms of the workload for the tax payer and the tax collectors.*

*By accurately and relevantly analyzing the influences generated by such changes, the author aims to demonstrate the harmful influences of some changes in terms of discouraging investments and honest labor.*

**Keywords:** *corporate tax, budget revenues, social contribution, deductibility;*

**JEL classification:** *H30, G18;*

Tax legislation reflects the doctrinal orientation of the executives even in conditions of economic crisis when fiscal measures some times seem to be saving or enslaving. The substantial changes as well as those related to conjuncture directly generate influences on budget revenues, and indirectly through their pressure on the taxpayers, which in turn will adjust the fiscal behavior.

Our legislation has been amended and this year by GO.6/2013 with direct influence on corporate tax, on the tax on the microenterprises' income, also there are changes on personal income tax, non-residents' income tax, then there are changes of VAT, and some small additions to the tax base of compulsory social contributions.

In terms of corporate tax there are some changes in the preparation of the Tax Audit Register in connection with research and development expenses, in connection with the depreciation rules and for certain non-deductible expenses, then, in terms of tax on the microenterprises' income, there was a change in the definition of microenterprises and, also, the right to choose to be a microenterprise was eliminated.

A spectacular and debatable, in the same time, change is that on imposing personal income made from agricultural activities. The personal income tax changes also in terms of deductibility of some expenses.

VAT amends the definition of liability of registered tax payers to register in terms of VAT with some adjustments referring to the harmonization with Directive 112/2006/EEC.

The influences of the legislative changes are measurable on a postoperative basis, still we have available some time projection models based on changes in the tax base, with indirect effects on budget revenues.

We will follow the changes in legislation in the following points depending on the tax that affects it, as follows:

a) The corporate income tax. First, since February this year we can speak of the implementation of the obligation of income tax payers to explicitly maintain the Tax Audit Register, for each income and expense in turn.

Regarding the deductions from the tax base, the R&D spending deduction ceiling is increased from 20% to 50%, thereby beneficially influencing the research.

Regarding the non-deductibility of expenses, there are additions to the legislation in force for the introduction of non-deductible expenses in the calculation of expense taxes later found to be associated with acts of corruption.

Also in the same context, it is better defined the notion of borrowed capital for determining the indebtedness in the calculation of the ceiling for deducting interest expenses and foreign exchange rate differences.

The deductibility of depreciation of commercial means of transport is limited to a level of 1500 lei/month.

Another change in determining the taxable base at corporate tax refers to the intangible assets with indefinite recovery period, which will be considered current expenses, so a simplification measure of exceptions when conciliating the net income result with the fiscal law.

b) The tax on microenterprises' income, the main change of this tax is the obligation to pay it, eliminating the right to choose the option between being the payer of this tax or the payer of the income tax. This change negatively affects businesses with activity based on prices with low added value, such as, for example, small middlemen who rely on minimum margins disadvantaged in favor of large networks. This measure is completed with the reduction of the turnover ceiling from 100,000 Euro to 65,000 Euro, the exchange rate at the date of the accession to the EU and the measure to eliminate the mandatory use of work force, (from 1 to 9 employees).

The changes regarding this tax are officially justified by the need to reduce fiscal evasion in the field of microenterprises with activity in agriculture, tourism, constructions and other services, but it seems that the negative influence is felt on the intermediaries as we have outlined above and another limitation on these businesses is the result of the reduction of the turnover limit.

c) The tax on personal income. The changes to this tax concern tax payers who have incomes from non-agricultural activities and non-resident individuals that have incomes from various sources in our country.

Regarding the taxation of the individuals' incomes which derive from crop farming, animal husbandry, beekeeping, the exploitation of forests and other such activities,

they will be taxed starting with February this year in fixed taxes on the cultivated surface for what exceeds the limit surface according to the crops obtained, in fixed amounts per animal for what exceeds a certain threshold on animal species, the number of bee families, etc., the introduction of this tax being justified by the elimination of this tax evasion in agriculture. I, however, believe that tax evasion should not be sought in the peasant households that carry out a subsistence farming, but in large farms and large tenants, some being in the state's ownership. These people will also owe the mandatory social contributions for income from agriculture, forestry and fisheries.

The taxation of income of non-residents are taxed in the country where they obtain these incomes, following that based on the conventions of the avoidance of international double taxation, the tax residency certificate and the tax certificate from the country where they obtain the incomes. The changes on the jurisdiction of this tax target the incomes of non-residents in Romania, but also abroad, regardless of the place of supply, less the international transport services its complementary services. Also, we introduce a new tax rate of 50% for revenues obtained in Romania and destined to a country with which Romania has signed an international double taxation convention.

d) The Value Added Tax. It is known that the consumption taxes are the object of the harmonization with EU regulations, namely Directive 112/EEC/2006, and this harmonization process is a continuous process.

In this context, the GO No 6/2013 clarifies the submission to taxation of the operations carried out at the market value between related parties, and also clarifies the lack of management and taxation of goods that are subsequently charge as stolen, being subject to taxation.

Regarding the VAT-collection system, there are provisions on granting the right to deduct VAT on purchases conducted by the beneficiary that do not enforce the collection of VAT from taxable persons applying this system.

Also there are changes and clarifications related to VAT payers registered in the Register of Intra-Community Operators (RIO), meaning that people in that register will be required to submit to the fiscal district body of the new administrators or associates within 30 days after the change, and, otherwise, take a tough measure namely, the payer will be removed from this register.

### **Conclusions:**

The changes to the fiscal code are officially justified as being necessary in the context of harmonization of consumption taxes to European directives and the need to reduce the level of tax evasion, but the explanations should be extended also to the effect of changes on the budget revenues in future periods and on the patrimonial influences and on the taxpayer's fiscal behavior.

In terms of budget revenues, it seems that the changes will not bring major budget solutions in terms of stability and elasticity of the tax system; such measures appear to be minor repairs to a mechanism burdened by the overweight of the load.

A real reform of the tax system would mean changes related to the alignment of the labor taxation to capital taxation, an adjustment of social security contribution in order to optimally distribute the tax burden between income taxation and income

taxation with the se contributions and social contributions.

Then, it would be necessary to set back again the distribution of amounts between the central budget and the local budgets, according to simple and transparent criteria regarding such redistribution.

Last but not least, it would be required adjustments on granting tax deductions for individuals' expenses made in certain useful tax purposes to encourage and select the consumption.

The author of this work has set the objective of summarizing the changes in tax legislation and presenting them in a form accessible to the analysis of the overall tax system, an analysis needed to understand the mediate effects in the fiscal procedure and, also, the structure effects of the tax system.

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## EXPERT SYSTEMS - DEVELOPMENT OF AGRICULTURAL INSURANCE TOOL

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**Abstract:** *Because of the fact that specialty agricultural assistance is not always available when the farmers need it, we identified expert systems as a strong instrument with an extended potential in agriculture. This started to grow in scale recently, including all socially-economic activity fields, having the role of collecting data regarding different aspects from human experts with the purpose of assisting the user in the necessary steps for solving problems, at the performance level of the expert, making his acquired knowledge and experience available. We opted for a general presentation of the expert systems as well as their necessity, because, the solution to develop the agricultural system can come from artificial intelligence by implementing the expert systems in the field of agricultural insurance, promoting existing insurance products, farmers finding options in depending on their necessities and possibilities. The objective of this article consists of collecting data about different aspects about specific areas of interest of agricultural insurance, preparing the database, a conceptual presentation of a pilot version which will become constantly richer depending on the answers received from agricultural producers, with the clearest exposure of knowledgebase possible. We can justify picking this theme with the fact that even while agricultural insurance plays a very important role in agricultural development, the registered result got from them are modest, reason why solutions need to be found in the scope of developing the agricultural sector. The importance of this consists in the proposal of an immediate viable solution to correspond with the current necessities of agricultural producers and in the proposal of an innovative solution, namely the implementation of expert system in agricultural insurance as a way of promoting insurance products. Our research, even though it treats the subject at an conceptual level, it wants to undertake an attempt to present the necessity and importance of implementing expert systems in agricultural insurance as a solution of development of the Romanian agricultural sector since insurance play an important role in the stimulation of investments in agriculture and in the stabilization of agricultural producers incomes. The results of the study, at a conceptual level, confirms the necessity of applying expert systems in agricultural insurance because of the benefits which would be created (informing agricultural producers about the existence and importance of agricultural insurance, the development of the insurance market which would lead to the development of agriculture, creation of new insurance products adapted to the needs of the farmers).*

**Keywords:** agricultural insurance; expert systems; agriculture.

**JEL classification:** C80; C88; G22; Q14.

## **1. Introduction - The Necessity of Implementing Expert Systems in Agricultural Insurance**

There are many reasons why the financial domain is so popular for expert system applications. The majority of problems from the finance domain can be split up into quantity and quality parts, and in a sense they can be formulated under some rules, facts, cases, forms or semantic networks. Thus, the financial domain can benefit from the application that uses the technology of expert systems. (Liebowitz, 1998) (Ganesan, 2006) believes that agricultural production has evolved into a complex business requiring the accumulation and integration of knowledge and information from many diverse sources. Unfortunately, agricultural specialist assistance is not always available when farmer needs it. In order to alleviate this problem, expert systems were identified as a powerful tool with extensive potential in agriculture.

The implementation of expert systems in the agricultural insurance domain could represent an encouragement of development towards agriculture and agricultural insurance because in view of the accomplishment of a modern agriculture, the need of maintaining the financial possibilities in the required conditions of the particularity of agricultural production is necessary. To this effect, the use of expert system in insurance represents a primordial tool for the protection of agricultural producers and farmers, fact why our agricultural sector need to be developed, all the more so that recently new risk have been shown as a result of climate change.

A study realized by Ciurea I.V., Paveliuc-Olariu C., Ungureanu G., Mihalache R. in 2011, which followed the agricultural consultation case from the North-East Region of Romania, 12 years after its establishing using the questionnaires method which were filled by a number of 80 specialists in agricultural consultation from the 6 counties of the North-East Region, emphasizing the following aspects: "All the persons that ensure consultations develop activities with a general character from all agricultural domains. There is an acute lack of specialists, a single person ensuring his services for thousands of farmers... A lack of interest is developed by the local authorities for consulting activities. Specialists are unhappy about their pay level, their limited possibilities of improvement, the high volume of work, the lack of equipment and transport, as well as political interference\_in the personnel recruitment process.

The conclusion of this study are other arguments that highlights the necessity of implementing a new informatics system in promoting agricultural insurance, the application of expert system technology within agricultural insurance is as well needed as it is useful due to the informing of agricultures about their existing insurance products and the reproduction of human expert reasoning in a form easy to understand, thus the user, regardless of his level of training, can take a decision that suits him the best in the respective moment.

Before utilizing expert systems in agricultural insurance, in view of following their efficiency, it is necessary to raise a few questions present in Figure 1.

Browsing Figure 1, we can easily find the necessity of implementing expert systems in agricultural insurances because of the high potential of insurance development, the simplicity in its use, but this imposes an initial investment (material and organizational) which implies the involvement of insurance agencies as well as the state, which is not always prompt.

**Who will be interested in using the system?**

- Agricultural producers, animal breeders

**What will be the finality of the system/the possible benefits?**

- A better awareness of farmers about the benefits of insurance will lead the way towards a better development of agricultural insurance and agriculture. The aim of the system is not that to replace specialists, it is do offer information to help getting a better understanding about the risk at which agricultural exploitation/animal effectives are exposed to and to offer solutions, according to the particularities of every case.

**Who needs to be involved to create the system?**

- Insurance agencies need to make data systems related to the creation of an agricultural insurance contract available to the engineer.
- Experts from related domains of agriculture: veterinarians; agricultural consultants; agricultural tools providers; seed providers; The National Institute of Meteorology and Hydrology to make available data's about temperature, humidity, precipitations as well as the implication of the Office of Soil Science and Agro Chemistry in view of stabilizing the soils hydro physicals parameters (fading coefficient and soil humidity).

**How much will it cost?**

- The costs of purchasing data, studies, system and maintenance engineers need to be taken in consideration.

**What is the necessary training level needed to use this system?**

- It doesn't need speciality knowledge, the system being designed to be able to be used easily by everybody.

**Where will be the system accessible?**

- A strategically place would be at the Town Hall, so it can be accessible to every farmer.

**What are the impediments of implementing such a system?**

- The lack of involvement and mobilization of insurance agencies, The Ministry of Agriculture and Rural Development, The National Institution of Meteorology and Hydrology, the Office of Soil Science and Agro Chemistry to provide complete data's in view of creating a decent knowledge base.

**Figure 1:** Useful questions before implementing expert systems in agricultural insurance

Source: compiled by the authors

## 2. Expert system structure

For a better understanding of the working mode of expert systems, next we will describe, briefly, the sequences that need to be gone through to develop the system as well as its components.

Expert systems are composed from two main parts: de development environment which is used to create the components and introduce the knowledge in the system containing elements (the purchase of knowledge module, the inference motor and the knowledge base) which will facilitate the creation of expert system, as well from the consulting environment which is used for counseling and for obtaining specialty knowledge, facilitating the use of the model and offering its users the advice of

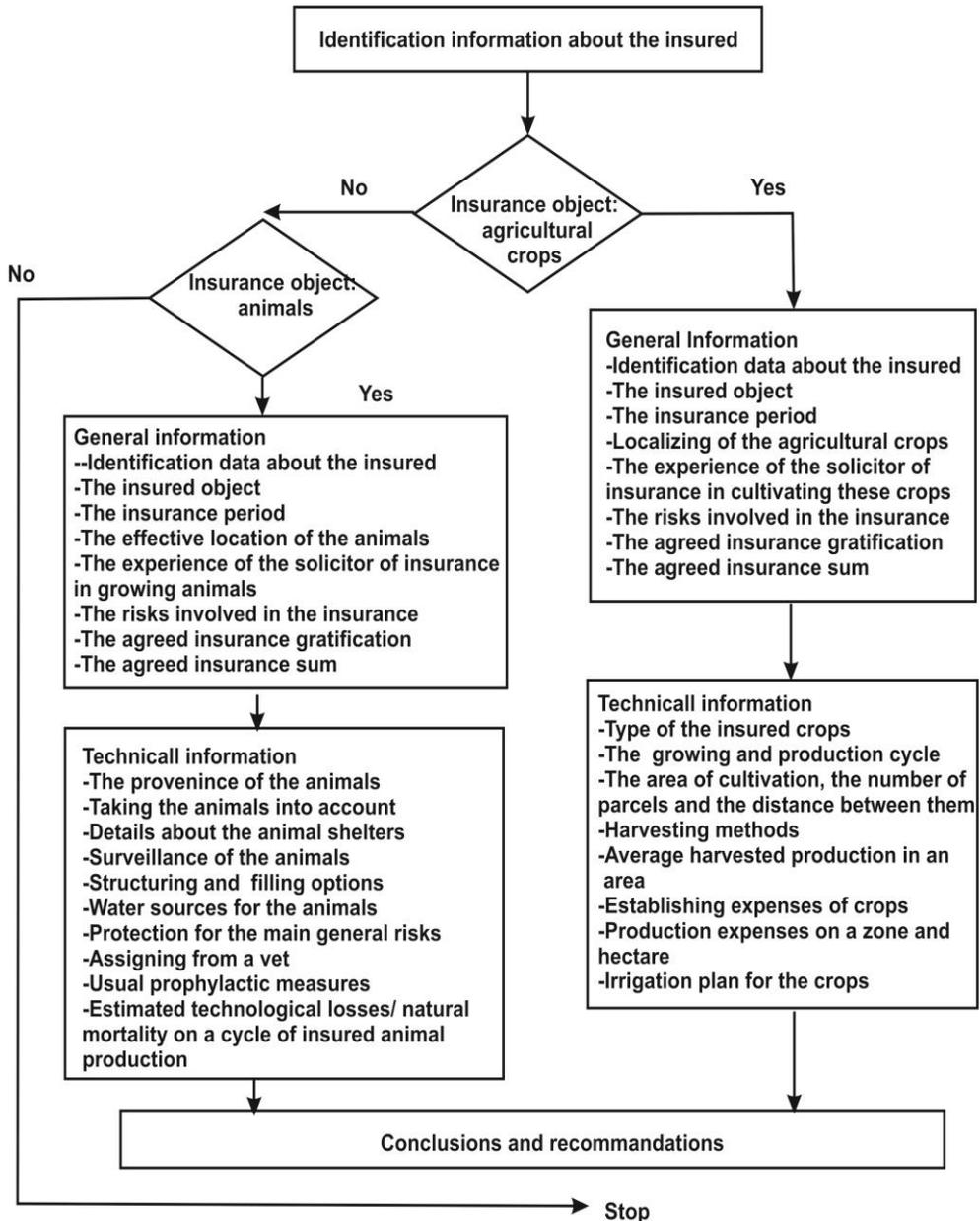
experts and answers to their questions (Turban, et al., 2011). Thereby, an interface exists that facilitates explanations as well as facilitating the recommended action. The architecture of expert system is composed of 3 base components:

- ❖ *knowledge base, which is formed from 2 parts;*
- ❖ *the rule base which contains the biggest part of the necessary knowledge to solve the problem which is specified;*
- ❖ *the facts base formed especially from knowledge specific to the problem that will be solved (formulation of the problem) as well as the resulting facts from a process inference from an inference motor (it contains all of the users data), representing the working memory. Because the systems rules are being created on the base of known fact, the decision process is influenced directly by the availability of the relevant facts. So, it is important that the facts base reflects perfectly reality and show exactly the modifications made.*

In view of preparing a very complex knowledge base, which will be included in the system, official documents or diagrams are being used, using specialty information from experts from within the agricultural insurance field (data related to the creation of an agricultural insurance contract) as well as experts from agricultural related environments. These need to contain in-depth knowledge in the domain, good communication abilities, experience and reputation so that the information offered would offer credibility. The acquired knowledge from experts and other sources will be communicated to the knowledge engineer (specialist in computers), he will be an intermediary between computers and human experts, which will process the information in such a manner that it will be applicable on a computer, creating a database. After the knowledge acquiring, their validity will be checked and a final, coherent database will be generated.

Thus, the expert systems consist of organizing information on different main levels. In Figure 2, we outlined the logical scheme of agricultural crops insurance and animal insurance within expert systems, where every level represents an integrated assembly of sublevels. For example, the level “The risks involved in insurance” from agricultural crops contains the sublevels: hailstone, hoarfrost (the late spring freezing and the early autumn freezing), downpours, storms, hurricanes, landslides, fires started from lightning, from which the farmer picks an option, based on his necessities.

We opted for a simplified schematic representation (on a single level) of the model of perfecting the expert systems in agricultural insurance for a better understanding of its functioning manner, where the system informs the user about the existing insurance conditions and offers an alternative based on the picked options.



**Figure 2.** Logical diagram of how an expert system works in agricultural insurance  
Source: compiled by the authors

*Inference engine:* it is a structural control component which picks from the knowledgebase the facts utilized for creating the reasoning in view of obtaining a decision option. The inference engine controls the mode and succession in which the knowledge from the rule base is applied on data from the facts base being a

computing program which applies new rules to facts to generate using induction, new facts which are being added to the knowledgebase or confirming/infirming a hypothesis, or the solution of the problem. Thus, the rule base is being run, searching for the identification of a correspondence between the facts from the conditions or the consequences of the existent rules and information in the knowledgebase. When such a correspondence is identified, the respective rule is used to produce a new knowledge or to confirm a hypothesis. This follows a series of major objectives, the elaboration of the problem solving plan after its necessities, commuting from a control strategy to the next one, the execution of actions provided in the solving plan, depending on the knowledge that we have at our disposal (<http://iota.ee.tuiasi.ro/~mgavril/Simpe/L2.htm>).

If the reasoning is done well, it can be transposed into the system with the help of the <<IF, THEN>> type rules, this being the most frequent, but we can also find rules which have an <<ELSE>> component which has the meaning to generate, at the end of the logical algorithm the best solutions for the user (agricultural producer) or to formulate a conclusion. Many expert systems have the capacity to explain to the user *why?* (by using motives that were at the base in the process of making an action) and *how?* (by explaining the inference process) reached by using their reasoning to their proposed solutions.

*Interface with the user:* it ensures the dialogue between the user and computer in an enthralling and easy to understand mode. For the interaction with the user, most systems use graphs or a texts with questions and answers, but they can be more complex by integrating dictionaries. In general though, an imposing scenario which interacts with the user can contain the next additional components (Turban et al, 2011): the subsystem of acquiring of knowledge, the working place (blackboard), the subsystem of explication generating, the subsystem of auto learning (knowledge-refining system).

*The subsystem of acquiring of knowledge* ensures the communication with the database interface, allowing the user to introduce new knowledge for creating or extending a database.

*The subsystem of explication generating* allows the following of the systems reasoning and issuing justifications for the obtained solutions, highlighting in this mode the cause of the mistakes or the failure motives, following the behavior of the system and answering question as: How did we get to a particular conclusion? or Why was a particular alternative rejected?

*"The working place"* is used to record the intermediary results, hypothesis and decisions. Three types of decisions can be recorded on a blackboard: a plan (for example how to approach a problem), an agenda (for example the actions while waiting for the execution potential) and a solution (for example, hypothesis and alternative routes of action which the system generated until now).

*Knowledge-refining subsystem* needs to be able to analyze motives for the programs' success or failure taking into account the obtained results which can make the knowledgebase better using a more efficient reasoning. Having the capacity of auto learning, the system can improve its behavior in a short time, by changing the rule base.

*Such a behavior of the commercial expert systems is experimented at several universities and research centers. But currently it's not mature enough to be used.*

After picking a proper tool (the most popular is the Corvid System) the attention shifted to the coding of the knowledgebase, the major concern in this stage being if

the coding process (defining variables, creating the logic blocks and constructing command blocks) is efficient and appropriately operated, to avoid errors. In what concerns the system evaluation, this implies the checking (by ensuring the fact that the knowledgebase contains the acquired data from experts and that no errors appeared in this stage of coding) and validation of the system (by confirming the fact that the system works correctly).

### 3. Study Case Regarding the use of Expert Systems in the Insurance of Agricultural Crops

After going through the questionnaire made by the expert systems the following information has been obtained: an agricultural producer from the Cluj-Napoca country, Cojocna parish, wants to solicit insurance for his wheat culture on an surface of 2 hectares, the average production obtained that wants to be insured consists of 3.500kg/ha, for the 21.01.2012- 31.08.2012 period. The average obtained production to a hectare in the last 5 years for the agricultural culture that wants to be taken into insurance is presented in table 2.

**Table 1.** Average production for a hectare (kg) obtained in the last 5 years for wheat

Nr. crt.	Type of agricultural culture	Years				
		2011	2010	2009	2008	2007
1.	Wheat	3.900	3.700	3.500	3.800	2.900

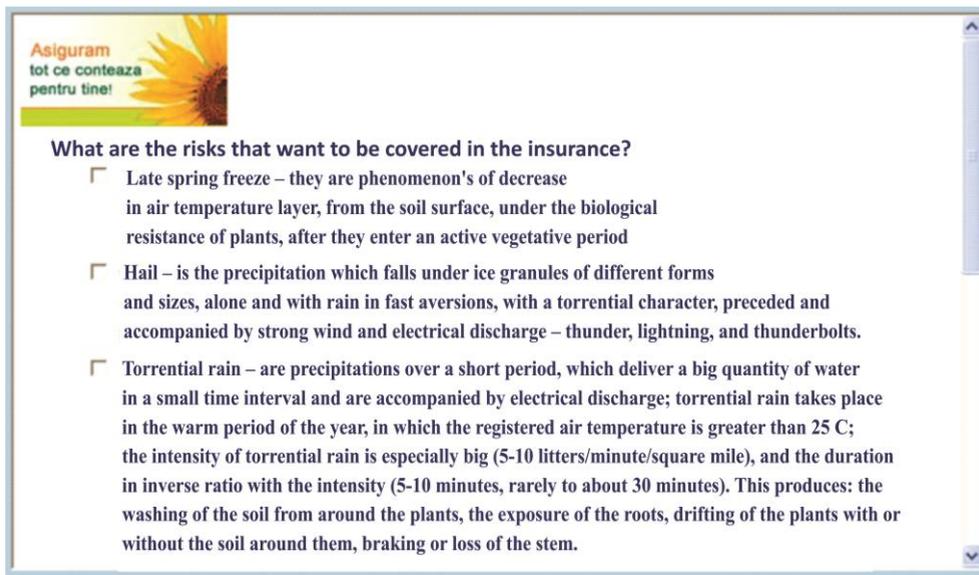
Source: Author processing's

For the agricultural culture insured no damage has been recorded in the previous agricultural year and the risks contained in the insurance are: direct effects of downpours, storms, hurricanes, collapses, landslides, fires started from any reason, the agricultural producer is willing to allocate a budget of 100 lei, not wanting to pay for deductibles.

In view of finding the insurance gratification and the gratification, the expert system will use the data communicated by the user to find the best possible option of insurance on the market taking into consideration his needs, going through a logical algorithm. The system will pick first price quota (%) of the respective culture taking into consideration the tariff group of the culture (wheat), the risks contained into the insurance (direct effects of downpours, storms, hurricanes, collapses, landslides, fires started from any reason) and the grouping of the counties on tariff groups (Cluj) which it will be applied to the cost of the harvest of the entire planted surface, the insurance gratification being obtained.

The expert system will be conceived in such a manner that it will be able to be used with ease by agricultural producers, offering additional explanations where it is required and argumentations for the recommendations it makes.

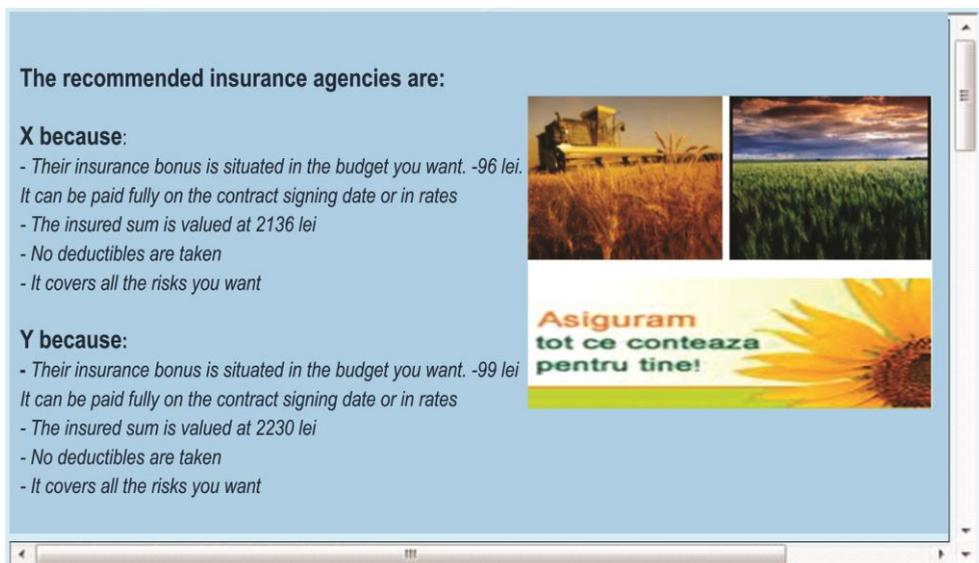
For example, referring to the risks contained in the insurance, the system offers a clear and explicit definition, compliant with figure 3, thereby so that the agricultural producers can identify the correct risks at which their agricultural exploitations are exposed.



**Figure 3:** Online questionnaire

Source: screen capture while running the application (Exsys, 2013)

In respect of the results, the expert system will recommend the first 3 insurance agencies which fit the farmers' necessities, arguing the choices made and offering the possibility of sending a solicitation to create an insurance contract on the website of the respective society, pursuant with figure 4.



**Figure 4:** The recommendation of the system

Source: screen capture while running the application (Exsys, 2013)

#### **4. Conclusions**

After running through the steps followed by the expert systems, we can easily see the efficiency of implementing artificial intelligence in agricultural insurance, the main benefits being the development of agriculture and insurances by removing the lack of information and the trust of farmers towards insurance so that they will have at their disposal solutions and newly improved information based on the previous experience of the users. Specialty literature from the studied expert systems area, highlights the benefits of implementing expert systems in all the areas of the socioeconomics activity, amongst them agricultural insurance, but, it doesn't deal with the agricultural insurance segment alone, in spite of its importance in the development of agriculture. This fact confirms the added value brought up by the existent article from specialty literature.

Using expert systems in agricultural insurance can contribute to the development of the agricultural sector, bringing immediate and long term benefits, whereas the behavior of the agricultural producers can be followed, their aversion towards the risk and the frequency and intensity of the risks in various regions, making the creation of better insurance products possible which will responds to the needs of the farmers, approached based on the different types of risks specific to agriculture, as well as the extending of the coverage of this products at the full level of the farmers inheritance, these having the role of sustaining in time, the development of the economic sector and maintaining the financial circuit in agriculture.

In point of the future research directions of this area, we can say that the success of applying expert systems in the agricultural insurance domain depends on the understanding of this systems importance, the availability and the capacity of the insurance agencies to support this domain, as well as the involvement of the Commission of Surveillance of Agriculture and the Ministry of Agriculture.

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# EMPIRICAL STUDY REGARDING SUSTAINABILITY OF ROMANIAN PENSION SYSTEM

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**Abstract:** *This paper is part of a broad, applied scientific research, based on popular empirical procedures (such as natural observation). Positivistic and constructive research methodology used was based on the consensual-inductive system (Locke), which is why we studied the different views of specialists on sustainability of pensions in Romania, necessary to formulate the problem of generating relevant information. Research strategies used were the comparative and longitudinal ones, as we analyzed the time evolution of qualitative indicators VUAN (unitary value of net asset) specific to pension funds Pillar II and Pillar III of Romania, concomitant with the number of participants in these funds, as to determine their direct relationship with the need for sustainability in this area. The hypotheses regarding causal relationship efficiency – participants - sustainability and needed measures for pension reform were built in this paper inductively (by analyzing the sustainability issues of pensions in time), causally (by explaining the cause and effect phenomenon studied), deductively, logically and subjectively (due to the existence and perpetuation of conflict premise between generations and social inequality between employees and pensioners). The qualitative approach of the phenomenon studied by collecting information (using mediated data collection technique) has allowed the relevant findings and practical solutions necessary for all those involved in this concerted action of pensions, which affects us all. Evolution of pension systems has been studied from the general to the particular, from the national to the European level. SWOT analysis of the public pension system was expanded with the pension scheme for private and voluntary. The role of this analysis was to highlight the weaknesses of the pension systems, as all have an absolute need to real stability. Relevant conclusions of our paper outline the characteristic perspectives and limits. In fact, these limits generate our actions for future study in this exciting area of research that concern us all.*

**Keywords:** *sustainability, public pensions, private pensions, SWOT (analysis), reform, VUAN (indicator)*

**JEL classification:** *Q01, H55, J32, O11, P41, P47*

## **1. Introduction**

Both on international and on national level, the pension system administration was a major challenge on the last decades for everyone involved in the process. The large number of retirees relative to the falling number of employees seriously threatens the sustainability of this system. Existing demographic problems (Vasile V. et al, 2011), and the increase of redistributed financial resources cause problems of sustainability of the budgetary deficit when the economic activity falls in a period of economic recession (Socol et al, 2010). Differences between pension systems

were analyzed by specialists in the field (Draxler, 2009), especially after pension reforms (Van Vliet et.al, 2011), to highlight the importance of private pension funds, to remove existing social inequities. In addition, it was found that the vulnerability of the pension system, supported by characteristic factors, constitutes a serious impediment to its future sustainability (Bouchet, 2003). Outlining of relevant models of sustainability for pension systems, tailored to specific developments corresponding to each country, were concerns of specialists in the field (Grech, 2010; Zeisel V.,2010/2011; Marotta, 2011) to provide solutions to sustainability problems arising in the process of pension reform. Regarding our country, pension reform must be rigorously implemented by substantially increasing the number of taxpayers to ensure specific sustainability (Beju, 2007). To this end, for the Pillar II pension fund (Coca-Cozma, 2012), in the future, there has to be some legislative stability, without affecting the relative balance between the interests and obligations of participants, administrators and government institutions. Instead, for the Pillar III pension funds (Coca-Cozma, 2012) is necessary to achieve, in the future, the simplification of procedures and streamline of the accession process, collection and administration system.

## **2. Hypotheses and data sources**

Taking into account the statistical data published on the website [www.csspp.ro](http://www.csspp.ro), opinions of specialists in the field and pension interests of participants (employers, employees, contributors, state), we think it is necessary to conduct this study (without analysis of the impact factors), so proposed and tested hypotheses are:

*H1: There is a causal relationship between VUAN values-the number of participants - the sustainability of the pension system?*

*H2: Which are viable and necessary measures (particularly for public pensions) to be applied in the reform of the pension system in Romania?*

## **3. Pensions: introductory approach**

As part of the contemporary public policy for the elderly, social policy programs have a special place, whose implementation measures vary from country to country, according to the degree of diversification of benefits, the level of resources allocated as volume and proportion of GDP. In this context, financial resources for pensions may come from the public budget, from insurance and savings or combinations of these resources.

### **3.1. Pension systems: general aspects of the EU**

Pension schemes (public or private) must provide income to pensioners, so that the sole criterion for assessing is in the terms of performance in sustainability conditions. Financing of pension systems is a challenge of the XXI century, on the background demographic aging, increasing of life expectancy and declining birth rates. Hence, the major concern in recent years of European countries has resulted in the development of strategies, whose implementation must ensure achieving adequate retirement living, financially sustainable, adaptable to socio-economic conditions and labor market changes. Specifically, some states have reformed their public pension systems as "Pay As You Go" (with mutual aid between generations), while others have promoted legislative provisions to improve the legal framework for supplementary pensions, privately managed, based on capitalization. The share of private pensions in EU Member States in the total income of pensioners is variable

depending on the degree of participation and the funds' assets and on the inclusion or non-inclusion of some redistributive elements in these systems. Traditionally, private pension systems in the EU Member States are of three types:

- regulated pension schemes (normatively defined) - represented by the privately managed public pension system component, including pensions, mandatory in some countries (the case of Spain, Slovakia, Latvia, Slovenia, Denmark) or optional in others (such as in the Lithuanian case);
- occupational pensions (unregulated) - established by contracts of employment, participation in these being subject of the work place, practiced in countries such as the Netherlands, Denmark, Sweden, Germany, Italy, Belgium;
- individual pension plans – on which both employees and employers can contribute (as the case of Slovakia, the Czech Republic, Estonia).

### 3.2. Pension system in Romania

The pension system in Romania is characterized by the presence of two components:

- public pension system – Pillar I, publicly administrated, redistributive, based on solidarity between generations;
- private pension system, privately managed, with contributions records of participants' individual accounts, based on capitalization, consisting, in turn, of two components:
  - privately administered pension - Pillar II, similar to that in other EU countries such as Poland, Lithuania, Slovakia, Slovenia and Latvian Republic;
  - voluntary private pension - Pillar III, similar to the one in the Czech Republic, Estonia, Slovakia.

According to the World Bank classification, private pensions implemented in Romania belong to Pillar II - privately administered pensions, mandatory, with defined contribution (DC) and Pillar III - privately administered pensions, voluntary, based on individual accounts. Implementation of the private pension system aimed primarily at providing additional income in retirement to lead, to a rate as high, to adequacy and sustainability of pension income. Reaching this objective depends on the development of the parameters influencing the accumulation of assets (such as: the level and dispersion of system coverage and contribution levels and yields). But the private pension system in Romania is a young one, in full process of implementation and expansion, which has suffered many transformations over the years. To identify the real problems that the public pension system is facing and to shape viable solutions to address these difficulties, we have developed a SWOT analysis of this system, shown in the table below (Table 1):

**Table 1:** SWOT analysis of the public pension system

<i>Strengths</i>	<i>Weaknesses</i>
<ul style="list-style-type: none"> <li>▪ Addressing the social issue of general interest;</li> <li>▪ The high level of awareness of entitlement among the population, due to advertising campaigns supported by CSSPP;</li> <li>▪ Taxes collected for social purposes, and the taxes per income from employers and / or payers going directly to CNAS and properly managed;</li> <li>▪ There is a guaranteed minimum wage and minimum guaranteed social pension that ensures the survival of workers and pensioners;</li> <li>▪ The equal access to pension rights is ensured;</li> </ul>	<ul style="list-style-type: none"> <li>▪ Major difficulties in planning, fundraising and managing the pension scheme;</li> <li>▪ Substantial inconvenience to cover the current pension budget amount;</li> <li>▪ Inequity created between different categories of pensioners' income (is the case of "privileged" pensions or "service" pensions provided to certain categories of professions) as the major discrepancies between income and consumption of retired population;</li> <li>▪ Annual indexation of pensions in percentage size increases the difference between small and large pensions;</li> </ul>

	<ul style="list-style-type: none"> <li>• Application of different methods of calculating pension income for different categories of people;</li> <li>• Maintaining chronic budget deficit the State Social Insurance Fund (SSIF) due to ongoing debt of CNAS through bank loans to achieve monthly payment of pensions;</li> <li>• Payment of current pensions as a result of the redistribution process of income collected by BASS;</li> <li>• Non-transparency of the social pensions fund;</li> <li>• Regulatory decisions and monitoring social pension fund are not always supportive of the proper risk management in the current pension system.</li> </ul>
<i>Opportunities</i>	<i>Threats</i>
<ul style="list-style-type: none"> <li>• Existence of young population in the working structure in high percentage, due to the acquisition of a high level of education;</li> <li>• Increase of the retirement age with a direct effect on reducing pressures on social fund;</li> <li>• Implement and development of long-term strategies that allow optimization of internal labor market performance, due to the use of EU funds by stakeholders in the national economy.</li> </ul>	<ul style="list-style-type: none"> <li>• Economic and financial crisis;</li> <li>• The decrease of the population, on the aging demographic characteristics;</li> <li>• Further perpetuating aging of population coupled with increasing dependency ratio of the elderly to those that are active;</li> <li>• High degree of poverty of the elderly;</li> <li>• Keeping impediments on domestic employment work market amid the high development of specific informal activities;</li> <li>• Existence of intense and lengthy processes specific to active population emigration, due to the reduction in the number of contributors to BASS;</li> <li>• Existing impediments to social security mechanisms of migrants and in the transmission of the incurred contributions to social funds among states under interstate agreements;</li> <li>• Asymmetric approach perpetuation of gender (women, men) of the basic conditions for entitlement to retirement;</li> <li>• Legislative and political instability, sometimes corruption.</li> </ul>

Taking into account the information contained in the above table (Table 1), we outline the following general recommendations for public pension reform:

- achieving and maintaining financial sustainability of the pension system
- fulfillment of social equity between generations, due to the principle "equal pension for equal contributions";
- the transparency reform the pension system.

Along with the public pension system, in Romania pension funds of Pillar II and Pillar III coexist, whose SWOT analysis (based on the annual financial statements and information published on the website [www.csspp.ro](http://www.csspp.ro)) we present in the tables below (Table 2 and Table 3):

**Table 2:** SWOT analysis of mandatory private pension system (Pillar II)

<i>Strengths</i>	<i>Weaknesses</i>
<ul style="list-style-type: none"> <li>• Increased of average annual return on pension funds (since its inception) and the number of participants;</li> <li>• Increase of total asset value of the funds in this sector due to profits made annually and the correlation between contributions paid and future benefits;</li> <li>• Contributions to these funds are tax exempt (excluding pensions above 1,000 lei) and do not impose additional financial obligations for participants.</li> </ul>	<ul style="list-style-type: none"> <li>• Payment of premium contributions to these funds only in May 2008, due to low level of financial literacy of population and minimal efforts to promote this system to stakeholders;</li> <li>• Diminishing of profits from these funds as a result of the current economic and financial crisis.</li> </ul>
<i>Opportunities</i>	<i>Threats</i>
<ul style="list-style-type: none"> <li>• Continue opportunity to educate the population amid its confidence in the system;</li> <li>• Increase of the percentage of contribution to the system through appropriate legislative changes.</li> </ul>	<ul style="list-style-type: none"> <li>• The high rate of elderly poverty amid rising unemployment and cross-border migration of the active population of the country;</li> <li>• The close relationship of dependence between the effects of the global recession and the financial markets among developing this system and existing political situation, due to aging.</li> </ul>

**Table 3: SWOT analysis of voluntary pension funds (Pillar III)**

<i>Strengths</i>	<i>Weaknesses</i>
<ul style="list-style-type: none"> <li>• Introduced in May 2007, it has recorded since the establishment an average annual return greater than the annual average inflation rate;</li> <li>• There is the prohibition of investment in toxic and dangerous assets;</li> <li>• Voluntary participation of contributors and tax deduction for employers;</li> <li>• Recorded positive investment results (most funds) for the increase of the number of participants and volume value of net assets.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced development of market on such funds on account of low interest for the population;</li> <li>• There are funds that have experienced negative returns on the market, with direct consequences on reducing participants' confidence;</li> <li>• Poor transparency in fund management.</li> </ul>
<i>Opportunities</i>	<i>Threats</i>
<ul style="list-style-type: none"> <li>• Establishing voluntary occupational schemes (direct contribution plans) by employers and trade unions;</li> <li>• Investment of financial resources of funds investing in money market instruments, deposits, current accounts, securities and other instruments with low risk;</li> <li>• Importance of involving institutions with legislative skills in regulating this system for citizens.</li> </ul>	<ul style="list-style-type: none"> <li>• Relatively high poverty rate of the elderly population, amid the financial crisis.</li> </ul>

During 2005-2011, the development of the pension system in Romania was characterized by:

- constant and solid evolution amid a climate unfavorable labor market and the positive trend of participants in voluntary pension funds;
- implementation of major projects in the private pensions market legislation (the guarantee of the rights of the private pension system);
- regulating the accounting frame required (in 2011) for the implementation and operation of the pension system in Romania (more specifically for the funds of guarantee of the rights of the private pension system), which will provide the appropriate framework for the implementation, in 2012, of the rules on investing and evaluation of private pension fund assets, of the disposal of the assets of private pension funds, risk management, technical provision;
- increasing of the role committed to the Private Pension System Supervisory or CSSPP (replaced in March 15, 2013 by Financial Supervision Authority) in the field of pensions.

These changes have resulted in further developments of pension funds from Pillar II and Pillar III in the period 2007-2011, characterized by:

- changes in the structure of administrators and private pension funds in the period analyzed due to changes in specific primary and secondary legislation have generated merger, dissolution or withdrawal from the Register CSSPP of those that do not assure the protection of the interests of participants in these funds;
- effectiveness of prudential supervision of entities in the private pension system by blending CSSPP action of "off-side" (embodied in the collection, verification and analysis of information collected through reports submitted by entities in the system) with the "on-site" action (evidenced by own checks performed), due to the elaboration of the "manual of good practice" in this area, organization of occupational pension system, risk monitoring through internal audit reports, analyzes and impact studies conducted on the development of assets of private pension funds.

In the extent of formulating conclusions and proposals that are relevant, we analyzed the evolution of a qualitative indicator of efficiency of pension funds respectively VUAN indicator compared to changing the number of participants in the pension

system (Pillar II and Pillar III). Increasing in this quality indicator VUAN favors the sustainability of the pension system. Data on these indicators were taken from the site CSSPP and their highlighting evolution, with necessary explanations during the period 2008-2011 is presented in the following tables. Before performing our analysis on the information provided in all tables presented in this paper, we point out the following:

- informative data are extremely limited in the area of public, private and voluntary pension funds, in Romania, due to limited bibliographic sources;
  - data analysis was done during the period 2008-2011, because they are fully completed financial years for which we can test the veracity of the information published in official addresses of Romania bodies involved in this area;
  - not to disturb the results of analyzes conducted, those pension funds for which there isn't complete data on previously the established period (2008-2011) were excluded from the interpretation of results;
  - informative data contained in various specialized papers, whose authenticity could not be verified on the official websites of Romanian authorities were not considered.
- We initially present the evolution of the VUAN indicator and the number of participants in private pension funds Pillar II (Table 4), and then the related pension fund Pillar III (Table 5), with corresponding explanations.

**Table 4: VUAN index and number of participants in private pension funds - Pillar II**

No.	Private pension fund (FPAP) - Pillar II	Unitary Value of Net Assets (VUAN) 31XII2008	Number of participants 31XII2008	Unitary Value of Net Assets (VUAN) 31XII2009	Number of participants 31XII2009	Unitary Value of Net Assets (VUAN) 31XII2010	Number of participants 31XII2010	Unitary Value of Net Assets (VUAN) 31XII2011	Number of participants 31XII2011
1.	FPAP ING	10,9813	1.368.533	13,111085	1.538.484	15,135362	1.656.650	15,430079	1.694.776
				19,4%	12,4%	15,4%	7,7%	1,9%	2,3%
2.	FPAP Vital	10,7040	119.950	12,128323	137.442	13,487383	176.401	13,911643	206.523
				13,3%	14,6%	11,2%	28,3%	3,1%	17,1%
3.	FPAP AIG/Alico	10,6814	256.900	12,478649	287.198	14,413267	326.879	14,90037	358.284
				16,8%	11,8%	15,5%	13,8%	3,4%	9,6%
4.	FPAP Arip	10,5806	371.842	12,475404	425.780	14,332213	495.974	14,876496	533.581
				17,9%	14,5%	14,9%	16,5%	3,8%	7,6%
5.	FPAP AZT Viitorul tău	10,5529	1.032.708	12,397866	1.168.600	14,307925	1.299.612	14,907391	1.341.010
				17,5%	13,2%	15,4%	11,2%	4,2%	3,2%
6.	FPAP OTP	10,1902	19.235	11,224695	20.900	Was absorbed by BCR Pensions Fund Privately Administrated			
7.	FPAP Interamerican	10,6026	246.641	Was absorbed by Eureko Pensions Fund					
8.	FPAP BRD	10,0630	96.453	11,462125	108.294	12,963021	142.616	13,443873	174.353
				13,9%	12,3%	13,1%	31,7%	3,7%	22,3%
9.	FPAP Omniforte	10,4198	60.034	Was absorbed by BCR Pensions Funs Privately Administrated					
10.	FPAP KD	10,2451	6.705	11,343943	7.362	Was absorbed by Eureko Pensions Fund			
11.	FPAP Prima pensie	9,5232	15.828	11,237694	18.371	Was absorbed by BCR Pensions Funs Privately Administrated			
12.	FPAP Pensia Viva	10,3087	284.253	11,867446	322.451	13,374034	382.671	14,037655	413.926
				15,1%	13,4%	12,7%	18,7%	5,0%	8,2%
13.	FPAP BANCPOST	9,8435	23.242	Was absorbed by Eureko Pensions Fund					
14.	FPAP BCR	10,4931	129.097	12,051833	225.292	13,993198	337.082	14,527372	388.835
				14,9%	74,5%	16,1%	49,6%	3,8%	15,4%
15.	Eureko			12,164085	304.942	13,953993	368.482	14,515999	404.736
		9,373889	4.031.421	12,246591	4.260.175	14,00080038	4.817.886	14,50436	5.111.289
				30,6%	5,7%	14,3%	13,1%	3,6%	30,6%

Source: www.csspp.ro , own processing

**Table 5:** VUAN index and number of participants in voluntary private pension funds - Pillar III

No.	Private pension fund – Pillar III	VUAN 31XII2008	Number of participants 31XII2008	VUAN 31XII2009	Number of participants 31XII2009	VUAN 31XII2010	Number of participants 31XII2010	VUAN 31XII2011	Number of participants 31XII2011
1.	FPF ING Optim	11,1692	38.217	13,244748	47.640	14,726382	63.004	14,9895	76.622
				18,6%	24,7%	11,2%	32,3%	1,8%	21,6%
2.	FPF ING Clasic/ Activ	10,8885	20.469	12,96305	22.609	14,502262	23.863	14,502262	26.801
				19,1%	10,5%	11,9%	5,5%	0,0%	12,3%
3.	FPF BCR Prudent/ Plus	10,7104	35.312	11,521589	48.173	12,495554	58.324	12,793458	72.637
				7,6%	36,4%	8,5%	21,1%	2,4%	24,5%
4.	FPF Pensia mea	10,1298	8.605	11,274824	9.542	12,426386	9.931	12,923993	9982
				11,3%	10,9%	10,2%	4,1%	4,0%	0,5%
5.	FPF AZT Moderato	9,8958	24.798	11,606393	26.621	13,162534	28.219	12,58441	30.887
				17,3%	7,4%	13,4%	6,0%	-4,4%	9,5%
6.	FPF Raiffeisen Acumulare	10,0218	6.008	11,903109	6.713	13,612872	7.018	13,749948	7.664
				18,8%	11,7%	14,4%	4,5%	1,0%	9,2%
7.	FPF AZT Vivace	9,5224	16.793	11,361121	17.562	12,601498	18.577	12,633895	19.648
				19,3%	4,6%	10,9%	5,8%	0,3%	5,8%
8.	FPF OTP Strateg	8,2580	323	8,974495	315	9,538021	301	Absorbed by The Stable Pension Fund	
9.	FPF Concordia Moderat	10,1161	220	12,467121	260	13,180071	263	14,287708	355
				23,2%	18,2%	5,7%	1,2%	8,4%	35,0%
10.	FPF BRD Primo			10,370143	2.475	11,092139	3.071	Absorbed by The Stable Pension Fund	
11.	FPF BRD Medio			10,348906	1.352	11,14802	2.324	11,267241	7.976
12.	FPF Eureko Confort			8,010565	2.192	9,223446	3.526	9,446852	3.656
13.	FPF Stabil			10,604551	1.718	11,649504	3.179	11,834395	4.151
		10,30675	150.745	96,34196	187.172	106,7076	221.600	108,46517	260.379
				834,7%	24,2%	10,8%	18,4%	1,6%	17,5%

Source: www.csspp.ro , own processing  
 CSSPP or PPSSC = Private Pension System Supervisory Commission

Analyzing the data in the table above (Table 4) we can conclude the following:

- FPAP OTP, FPAP Omniforte and FPAP Prima Pensie were absorbed by BCR FPAP and Interamerican FPAP, FPAP KD and FPAP BANCPOST were absorbed by FPAP Eureko, which is why we removed them from our analysis;
- in 2009, 2010 and 2011 we can observe the increase of VUAN indicator as opposed to 2008, but the growth was well below of the average percentage of 30.6% on all funds (in 2009) to 14.3% (in 2010) and 3,6% (in 2011), due to removal from the analysis of private pension funds Pillar II above mentioned, of the evolution of different specific value of the assets from one fund to another, of methodological changes to the rules relating to rates of return on these funds (Norm no.7/2010 of CSSPP), of reduce actual contributions paid by participants and their tax deductibility, even with aggressive advertising funds made for changes in purchasing, of power of buy of nominal pensions and inflation rate, of the movements of currency, of the central bank interest rates (ex. interest rates on the interbank market in 2010 showed a downward trend, due to excess liquidity), of changes in stock market indicators;
- in 2009, 2010 and 2011 there was a positive development specific to the number of participants compared to 2008, which is superior to the average of medium percentage of all funds of 5.7% (in 2009), 13.1% (in 2010) and 30,6% (in 2011), on account of financial specific changes to each fund, aggressive advertising conducted by some funds.

Examining the data in the table above (Table 5) we can conclude the following:

- FPF OTP Strateg and FPF BRD Primo were absorbed by FPF Stabil and FPF BRD Medio, FPF Eureko Confort and FPF Stabil appeared only in 2009, so we removed them from our analysis because their development was done on a too short period of time;
- in 2009, 2010 and 2011 we can remark the favorable trend of increase of VUAN indicator compared to 2008, but these rates were significantly lower than the average percentage of 834.7% on all funds (in 2009) to 10.8% (in 2010) and 1.6% (in 2011), due to the removal from the analysis of Pillar III pension fund mentioned above, of different developments specific value of the assets from one fund to another, of reducing actual contributions received by the funds;
- in 2009, 2010 and 2011 there was made a favorable trend specific to the number of participants than in 2008 (some funds having diminished values to the average percentage of all funds of 24.2% in 2009, 18.4% in 2010 and 17,5% in 2011) due to aggressive advertising specific to each fund.

#### **4. Conclusions, limits and perspectives**

Analyzing the tables above (Table 4 and Table 5) that comprise the index data on VUAN evolution and the number of participants, we draw the following conclusions:

- the number of participants in pension funds Pillar II and Pillar III has changed from one year to another, for the purposes of registration of the upward trend to some, but to others (which were absorbed) transfers took place amid alarms "drawn "by the Social Protection Committee on the high amount of management fees in total contributions maturity funds;
- the number of participants in Pillar III is significantly lower than the one under Pillar II, which shows the "reduced appetite" for optional insurance;
- the evolution of the number of participants in private administrated pension funds and voluntary ones was influenced by changing the number of employees, of

material benefits (in the form of grants or reduce payable contributions) offered to employers by law, of unemployment rate, of average wage value gross on economy, of EU funds absorption or non-absorption in the Romanian market designed to create and maintain jobs for the contributors to the pension.

Following the analysis performed and presented, we consider that there is a direct relationship between the sustainability of pensions – VUAN value - the number of participants, as meaning that the increasing the number of participants (implicitly the values of contributions) and VUAN value, represents real evidence of sustainability for pension system in Romania. So, *our first hypothesis (H1) is verified completely*. The current economic and financial crisis that we all go through generated considerable decrease in public confidence in financial institutions, whose direct repercussion was seen in subtracting the finance accumulated assets to retirement. If the answers of various government authorities were varied from country to country (ex. the Bulgarian Financial Supervision Commission reduced the technical interest rate from 3% to 2.8%, the Supervisory Commission Pension Funds COVIP in Italy relaxed the maximum liquidity for investment, etc.), CSSPP allowed (by additional legislation) investing pension fund assets in 100% in government bonds issued by Romania and other EU countries, due to exemption from compliance of managers to minimum limits and exposure on a bank guarantee of up to 5% of the fund assets. To achieve these goals, CSSPP reformed the current pension system in Romania. This reform is a major concern of the "actors" involved, particularly specialists in the field. In this respect, we agree with the certified specialists' opinion (Vasile et al, 2012) which proposed:

- maintaining public pension pillar (Pillar I), in the conditions of deep reform and strengthening its own private component, with capitalization, or
- waiver of Pillar I applicable to insurance programs for youth and operation on a transitional period, in parallel, of two pension systems - one in liquidation (due to state ownership on support services dedicated to elderly) and a new one with significant a private component.

The second variant listed above we consider to be less expensive for the state and national social assistance system, although current EU guidelines are for the former.

- additional taxation in tranches, with the share of 16%, of wages that exceed the average level of the tax rates and targeting this fee to reduce the deficit and balance the public pension Pillar I gradually would be an important action in the reform, along with the outsourcing of the minimum pension to the state budget, assessed as income from social assistance. This type of minimum pension could be supplemented by a system of benefits in community work. More specifically, the municipalities can create centers for the elderly, where specific activities will be carried through volunteering by them amid increasing interest active aging for additional revenue (through grants to employers when hiring elderly) and declining the number of the assisted;

- for the sustainability of the private pension system, reevaluate the active period (retirement age going upward), encouraging additional contributions (through the development of appropriate incentive for calculating pension contributions above the ceiling contributory) would be an effective measure aimed at allowing further tax deduction policy (which would increase companies' interest in providing employee benefits in the form of contributions to a voluntary pension fund);

- updating the purchasing power of nominal pensions by indexing for inflation the value of the pension point and reconsidering the relationship between pensions and the average wage by periodic reviews dependent on economic performance;
- calculation of the contribution in pension funds to ensure a decent income by including the amount of the pension financial simulation and risk number for annual fluctuations in investment markets, thus ensuring the guarantee of nominal capital invested;

Considering the presented conclusions, in order to achieve a strategic objective (protection of participants and transparency in the private pension system) of CSSPP mission in its work, we propose the creation of a record of administrators, custodians and marketing agents in the private pension funds on the site of the supervisory authority, which has to:

- include all necessary information about them (including action taken on them, after controls);
- be accessed by any individual and / or legal person and any institution in the country or abroad.

Relevant proposals presented in this paper *determine the final confirmation of our last hypothesis (H2)*. However, we know that this paper presents both scientific limits (caused by lack of information regarding pension system from Romania) and practical (materialized in the interest of decision makers and the application of presented solutions). The existence of these limits leads us to further deepening of this interesting and actual topic, because the treated subject affects us all.

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## TRANSPARENCY OF LOCAL BUDGETS IN THE NORTH-WEST REGION OF ROMANIA

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**Abstract:** *The central researched element in our paper is the local budgets, the basic component of local public finances. Local budgets, like any other budgets, are the most important tool for the management (of local governments) planning, forecasting, implementing and monitoring the results of administrative-territorial units activity, also being an appropriate tool for enhancing performance. A budget is the government's plan regarding the use of public resources to meet the citizens' needs. The aim of this paper is to realize a research on budget transparency in local governments from the Nord-West Region of Romania, regarding the availability of the budget information on the websites of the county councils and the county residences. The key element of good governance in today global economic environment is transparency that can be defined as the openness of public authorities (central and local) regarding their policy intention, formulation and implementation. For local governments budget transparency is an important issue, due to the growing role of administrative-territorial units, confirmed over time by the economic reality. The importance of local budgets has increased in recent years due to the need to improve management efficiency and accounting at the level of local governments. Not only policy makers but also the citizens need information regarding local government current activities, expenditures, development projects and policies. In this context of a growing need for information, the transparency of local budgets is a mandatory condition for any local government. The combination of budget transparency and public participation in budget processes has the potential to combat corruption, foster public accountability of government agencies and contribute to judicious use of public funds. In this context, budget transparency represents the mean through which ordinary citizens and civil society organizations can access information about the allocation and use of public resources, so that they can assess how government officials manage public funds. Budget transparency needs to be implemented due to the benefits it brings and the most important one is obtaining better budgetary outcomes.*

**Key words:** *budget, budget transparency, local public finance, local governments.*

**JEL classification:** *H60, H72.*

## **1. Introduction**

The national public budget is the financial plan of the state which provides income and expenses for a specific period of time, in this case a year. The national public budget includes: state budget, local budgets and social insurance budget.

Therefore, in accordance with territorial administrative division of our state, local budgets are made up of counties' budgets and Bucharest budget, the budgets of cities, towns and villages. As part of the national public budget, local budget activity is circumscribed to national budgetary activity, knowing the same steps and is carried out on the same principles, but seen through the specificity of local government activity.

Local budgets are only one of the important aspects regarding the local public administration and any discussion regarding this issues must be placed in the context of the institutional framework taken as a whole (Ichim, 2010:243). Local public finances refer to the economic relationship through which the territorial-administrative units constitute and use their cash resources in order to provide public services to meet economic, social, cultural and public requirements. Due to the diversity of the public services that must be provided by the territorial-administrative unit and the complexity of economic and socio- cultural activities local public finance play an important role within the public finance (Onet, 2005).

The concern regarding budget transparency is an older one for the researchers. The meaning of this notion evolved over time from a simple norm in governmental accounting to "a tool for facilitating a relationship between public budgeting and market requirements, civil society demands and citizen participation" (Alegre et al, 2011:2). Different international organizations that promote budget transparency consider that new systems for public finance should first be tested on local governments before they are implemented at higher levels. Transparency is needed because local budgets reflect strategy, planning and content of a public administration.

## **2. General Aspects Regarding Budgets**

Voinea (2002) defines local budgets as being the programs through which are provided and approved annual revenues and expenditures of territorial-administrative units, in order to accomplish the administrative tasks of local governments and to fulfill the local public's needs. So, we can define local budgets as operational plans according to which the administrative unit guides its activity in the next fiscal year and is also the optimal standard for financial reporting to the local council.

Local budgets are prepared by every territorial-administrative unit due to the principle of autonomy, assuring the decisional autonomy of local governments and the improvement in the use of local funds and financial resources. Local budget can be interpreted in various ways as Ichim mentions in his paper "Changes in the structure of Romanian local budgets", such as: "A document..., a law..., a system of financial flows..., and a fiscal policy instrument of local administration." (Ichim, 2010:245).

The importance of local budgets arises from their role in assuring effective management of local government that determines the ultimate objective, the local development, a priority in the context of the new economic and social conditions.

Each administrative-territorial unit has well established tasks and the local budget is the financial instrument for resource mobilization and redistribution at local levels

and connects the public expenditure decisions with the real cost of resources. For local development a key factor is the local resources that can be optimized to the community needs. According to Ichim (2010) there are two conditions for the budgeting process to be efficient: (1) to take into account the significance of numbers and (2) to recognize this annual process as an opportunity to: evaluate local government services and facilities offered by them; establish priorities; consider possible changes; plan services and future needs and review and amend the income sources of the local budget (Ichim, 2010:245).

### **3. Legislative Aspects Regarding Local Budgets**

The general legal framework of the local public administration in Romania is provided by the Constitution of 1991, revised after the 2003 referendum, that states in Chapter V, Section 2 the basic elements and principles for local public administration, public finance Law 500/2002, the State Budget Law, the law on public local administration 286/2006 which sets out the consecrate principles of the previous law number 215/2001 and Law 273/2006 on local public finances. Regarding the public access to public information the legal framework is constituted from Law 544/ 2001 on free access to public information with ulterior supplements (Law 371/2006, Law 380/2006, Law 544/2001 published in Official Monitor 425/2007 and Law 188/2007) and Law 52/2003 on transparency in public administration completed by Law 242/2010. To all these we should add OMPF nr.1917/2005, on Accounting of Public Institutions, Published in Official Monitor No. 1186 from 29.12.2005 with ulterior amendments and supplements.

Budgetary procedure regarding local budgets is conducted on the principles stated by the named laws. So, according to Law 286/ 2006 with ulterior completions public administration in territorial-administrative units is organized and operates under the principles of decentralization, local autonomy, devolution of public services, local governments' eligibility, legality and *consultation of citizens* in solving local problems of special interest." Regarding the *principle of consultation of citizen* we can say that it requires that the public to be consulted in the design and adoption of local budgets. Law no.273/2006 on local government finance establishes the following principles: universality, *transparency and publicity*, unity, monetary unity, annuality, budgetary specialization and balance. The principle of transparency and publicity requires that the budget process is an open and transparent one, this being achieved by: (1) publishing in the local press, on the website of the public institution or by displaying at the local public administration authority the draft of the local budget and annual account of its implementation; (2) public discussion of local budget draft, during its approval and (3) presentation of the annual account of local budget execution in public meeting.

Procedures for advertising and publishing the budgets of territorial-administrative units are presented in Law 273/ 2006, article 76, with ulterior modification. According to this article the principal officers of local public institutions have the obligation to publish on the websites of territorial-administrative units the following documents and information: budgets' draft stipulated in art. 1 paragraph. (2) subjected for public consultation, including their annexes, within two working days of the submission to the public consultation; communications such as quarterly and annual are prepared financial statements on the budgetary execution, within 5 working days of their receipt; budgets stipulated in art. 1 paragraph. (2) approved, including their annexes,

within 5 working days of the approval; financial statements on quarterly and annual budgetary implementation for budgets stipulated in art. 1 paragraph. (2), including outstanding payments, within 5 business days after their deposit with the general directions of public finances; general budget of the public administrative unit, prepared according to the methodology approved by order of the Ministry of Internal Affairs and the Minister of Public Finance, within 5 working days of the submission of the council; register of local government debt and guarantees local registry, updated annually by 31 January of each year and public investment program of the administrative-territorial unit within 5 working days of approval.

The article 1 point 2 in the Law 273/ 2006 refers to: local budgets of communes, towns, municipalities, districts of Bucharest, counties and Bucharest; budgets of public institutions wholly or partly funded from local budgets, as appropriate; budgets of public institutions financed from own revenues; budget of external and internal loans for which repayment, payment of interest, fees, expenses and other costs are paid from local budgets and from: external loans contracted by state and sub-loaned to local authorities and / or operators and public service subordinated to them; loans to local government authorities and state-guaranteed, foreign loans and / or internal contracted or guaranteed by local authorities and external grants budget.

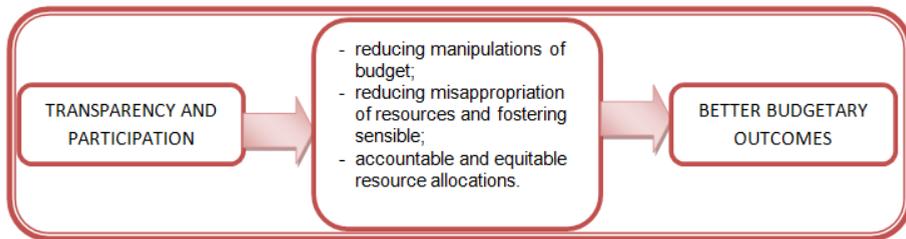
At the European level the Financial Regulation establish that the budget shall be established and implemented in accordance with the principles of unity, budgetary accuracy, annuality, equilibrium, unit of account, universality, specification, sound financial management which requires effective and efficient internal control, and transparency, information found on the website <http://ec.europa.eu>. According to Article 34, point 2 in the Financial Regulation the budgets shall be published within three months of the date on which they are declared definitively adopted. From these articles we see that the transparency of budgets is regulated at the level of European Union so the Romanian legislation must reflect the requirements of the European one. Thus, the Law on public finances (500/2002) is aligned with the Council Regulation on the Financial Regulation nr.1605/2002 on the budget of the European Community.

#### **4. Budget Transparency**

Around the world politicians and not only are realizing the existing relationship between good governance and increasing economic and social outcomes. The key element of good governance in today global economic environment is transparency that can be defined as the openness of public authorities (central and local) regarding their policy intention, formulation and implementation. It is obvious that the budget is the “governments’ key policy document”. Budget transparency is defined as the full disclosure of all relevant fiscal information in a timely and systematic manner. Budget transparency is a precondition for public participation in budget processes. The combination of budget transparency and public participation in budget processes has the potential to combat corruption, foster public accountability of government agencies and contribute to judicious use of public funds (OECD, 2002).

Budget transparency represents the mean through which ordinary citizens and civil society organizations can access information about the allocation and use of public resources, so that they can assess how government officials manage public funds. The lack of transparency and democratic control sustain a proper environment for graft and corruption, while citizen and civil society organizations can’t analyze

and monitor budget implementation and assess if the objectives established in the initial budget were obtained by the local government. Some of the benefits of transparency are presented below:



**Figure 1:** Benefits of transparency and participation in the local budgetary processes  
Source: own processing after Pekkonen and Malena

Regarding budget transparency there are a lot of initiatives and concerns at the international level resulting in guidelines or technical standards developed by international organization regarding data presentation and fiscal management procedures relevant to fiscal transparency. We can mention here the Organization for Economic Cooperation and Development (OECD) Best Practices for Budget Transparency, International Monetary Fund's (IMF) Code of Good Practices on Fiscal Transparency, United Nation's International Code of Conduct for Public Officials, International Budget Partnership's Open Budget Initiative, International Accounting Standards for the public sector (developed by the Public Sector Committee of the International Federation of Accountants), data dissemination standards (established by IMF and containing standards for providing economic and financial data to the public), fiscal reporting standards (included in the IMF' Manual of Government Finance Statistics), international accounting control guidelines (established by the International Organization of Supreme Audit Institutions (INTOSAI) regarding internal controls), international standards for government auditing (set by INTOSAI) and the fundamental principles of official statistics (set by the United Nations Statistical Commission regarding the integrity of official statistics). All this international movement regarding fiscal transparency determined, in the recent years, a reaction of civil society from developed countries for improvement of budget transparency. The OECD Best Practices for Budget transparency has three major pillars: budget reports, specific disclosure and ensuring integrity. Regarding the first pillar, budget reports, the OECD Best Practices states minimum content and specific periods when budget reports must be issued. The IMF's Code of Good Practices on Fiscal Transparency establishes a set of principles and guidelines for a sound transparency framework regarding fiscal policy. The IMF's Code is structured around four pillars (IMF 2007a, 2007b): Clarity of roles and responsibilities; **Open budget processes**; **Public availability of information and Assurances of integrity**. The last three pillars of the Code have multiple similarities with the OECD Best Practices and even go further in several aspects. Not only for public administration and political science the transparency in public financial management received increased attention but also for the economics research, that focused especially on testing the benefits of fiscal transparency such

as lower sovereign borrowing costs (Glennester and Shin, 2008), limited creative accounting (Alt, Lassen, & Wehner, 2012), improved fiscal performance (Alt & Lassen, 2006a, 2006b) and decreased corruption (Reinikka & Svensson, 2004). Authors such as Esteller-Moré and Polo-Otero (2008) explain fiscal transparency through combining political competition variables with tax pressure, while Hanssen (2004) checks the hypothesis according to which budgeting practices will be more transparent in systems marked by high political competition.

The International Monetary Fund (International Monetary Fund, 2007a:8) sustains that budget transparency “helps to highlight potential risks to the fiscal outlook that should result in an earlier and smoother fiscal policy response to changing economic conditions, thereby reducing the incidence and severity of crises.” According to International Budget Partnership “transparency means all of a country’s people can access information on how much is allocated to different types of spending, what revenues are collected, and how international donor assistance and other public resources are used” (OBI, 2012).

Also budget transparency can be seen as an indicator of quality of institutions and countries’ credibility, this idea being confirmed by articles regarding transparency and by rating scales based on transparency (Hameed, 2005). According to OBS 2012 the new evidence on the impact of budget transparency and accountability indicates: transparency can help attract cheaper international credit; opacity in fiscal matters can undermine fiscal discipline; transparency and public participation can help shine the light on leakages and improve efficiency in public expenditures and transparency and public participation foster equity by matching national resources with national priorities.

## **5. Case Study Regarding Budget Transparency in the North-West Region**

In this part of our paper we try to see if the procedures for advertising and publishing the budgets of territorial-administrative units that are presented in Law 273/ 2006, in article 76, with ulterior modification, concerning the obligation of principal officers of local public institutions to publish on the websites of territorial-administrative units the budgets’ draft, financial statements on the budgetary execution, the approved budgets, financial statements on quarterly and annual budgetary implementation for budgets, the general budget of the public administrative unit, register of local government debt and guarantees local registry and public investment program of the administrative-territorial unit. To do this we selected the North-West Region of Romania that includes 6 counties, 42 cities of which 15 municipalities, 398 communes and 1,823 villages.

We searched on the websites of the county council and of the municipalities (mayors) for public information regarding the budgets. The six counties are: Bihor, Bistrița-Năsăud, Cluj, Maramureș, Satu-Mare and Sălaj. The district’s residence for the counties mentioned are: Oradea, Bistrița, Cluj-Napoca, Baia-Mare, Satu-Mare and Zalău. Our analysis will be conducted only for the information published by the 6 County Councils on their websites and the 6 municipalities just mentioned. For the 6 counties the data was collected in 7<sup>th</sup> of April 2013 and for the municipalities on 29<sup>th</sup> of April 2013. The results of our analysis are presented in the tables below:

**Table 1: Available information on the websites of the County Councils from the North-West Region**

County	Budget Draft		Initial Approved Budget		Corrected Budget		Budget Execution Account		Indicators of Achievement		Financial Statements	
	Year	Checked	Year	Checked	Year	Checked	Year	Checked	Year	Checked	Year	Checked
Bihor	2013	x	2013	-	2013	-	'13	-	2013	-	2013	-
	2012		2012	x	2012	x	2012	x	2012		2012	
	2011		2011	x	2011	x	2011	x	2011		2011	
	2010		2010	x	2010	x	2010	x	2010		2010	
Bistrița-Năsăud	2013	x	2013	-	2013	-	2013	-	2013	-	2013	-
	2012		2012	x	2012	x	2012	x	2012	x	2012	
	2011		2011	x	2011		2011	x	2011		2011	
	2010		2010	x	2010		2010		2010		2010	
Cluj	2013	x	2013	-	2013	-	2013	-	2013	-	2013	-
	2012	x	2012	x	2012		2012	x	2012		2012	x
	2011		2011	x	2011		2011	x	2011		2011	x
	2010		2010	x	2010		2010	x	2010		2010	
Maramureș	2013	x	2013	-	2013	-	2013	-	2013	-	2013	-
	2012	x	2012	x	2012		2012		2012		2012	
	2011	x	2011	x	2011		2011		2011		2011	
	2010	x	2010	x	2010		2010		2010		2010	
Satu Mare	2013	x	2013	-	2013	-	2013	-	2013	-	2013	-
	2012	x	2012	x	2012	x	2012	x	2012	x	2012	x
	2011		2011	x	2011	x	2011	x	2011	x	2011	x
	2010		2010	x	2010	x	2010	x	2010	x	2010	x
Sălaj	2013	x	2013	-	2013	-	2013	-	2013	-	2013	-
	2012	x	2012	x	2012		2012		2012		2012	x
	2011	x	2011	x	2011		2011		2011	x	2011	x
	2010	x	2010	x	2010		2010		2010		2010	x

Source: own processing

**Table 2: Available information on the websites of the District's Residence from the North-West Region**

District's residence	Budget Draft		Initial Approved Budget		Corrected Budget		Budget Execution Account		Indicators of Achievement		Financial Statements	
	Year	Presented	Year	Presented	Year	Presented	Year	Presented	Year	Presented	Year	Presented
Oradea	2013	x	2013	-	2013	-	2013	-	2013	-	2013	-
	2012	x	2012	x	2012	x	2012	x	2012	x	2012	x
	2011	x	2011	x	2011	x	2011	x	2011	x	2011	x
	2010	-	2010	x	2010	-	2010	-	2010	-	2010	-
Bistrița	2013	x	2013	x	2013	-	2013	-	2013	-	2013	-
	2012	x	2012	x	2012	x	2012	x	2012	x	2012	x
	2011	x	2011	x	2011	x	2011	x	2011	x	2011	x
	2010	x	2010	x	2010	x	2010	x	2010	-	2010	x
Cluj-Napoca	2013	x	2013	x	2013	-	2013	-	2013	-	2013	-
	2012	x	2012	x	2012	x	2012	x	2012	-	2012	x
	2011	x	2011	x	2011	x	2011	x	2011	-	2011	x
	2010	-	2010	x	2010	x	2010	x	2010	-	2010	-
Baia-Mare	2013	x	2013	x	2013	-	2013	-	2013	-	2013	-
	2012	x	2012	x	2012	x	2012	-	2012	x	2012	x
	2011	x	2011	x	2011	x	2011	-	2011	-	2011	x
	2010	-	2010	-	2010	-	2010	-	2010	-	2010	-
Satu Mare	2013	x	2013	-	2013	-	2013	-	2013	-	2013	-
	2012	x	2012	x	2012	x	2012	-	2012	-	2012	x
	2011	x	2011	x	2011	x	2011	-	2011	-	2011	x
	2010	x	2010	-	2010	-	2010	-	2010	-	2010	-
Zalău	2013	x	2013	x	2013	-	2013	-	2013	-	2013	-
	2012	x	2012	x	2012	x	2012	x	2012	x	2012	x
	2011	x	2011	x	2011	x	2011	x	2011	x	2011	x
	2010	-	2010	x	2010	x	2010	x	2010	-	2010	x

Source: own processing

From the table it is obvious that none of the six county councils has complete information on their websites as required by law 273/ 2006. Moreover, there are some of the documents stipulated by law that can't be found on the websites of the institutions or if they can be found, the documents aren't unitary published, such as quarterly reports on budget execution. From the analysis websites we found that there isn't a unified presentation of financial information at the level of the county council in North West and this type of information, in some cases, it is difficult to find on the websites because there isn't created a special page for this information. Of the six websites analyzed the best structured website and that included the most comprehensive information is the website of Satu Mare county council.

The same conclusions are applicable for the 6 municipalities taken in out study. What we can mention here is that the municipality of Cluj-Napoca has on its web site a page entitled "Participatory budgeting", this being an unique initiative in the studied Region.

The International Budget Partnership realizes the so-called Open Budget Survey that measures the state of budget transparency, participation, and oversight in countries around the world and it consists of 125 questions, being completed by independent researchers in the countries assessed. Ninety-five of the questions deal directly with the public availability and comprehensiveness of the eight key budget documents that governments should publish at various points of the budget cycle. The Survey does not reflect opinion. It measures observable facts related to budget transparency, accountability, and participation (OBS, 2012) In order to allow for comparisons across countries and over time, the IBP calculates the Open Budget Index (OBI), a simple average of the quantified responses for the 95 Survey questions that are related to budget transparency. Open Budget Index (OBI) score, a broad comparable measure of a country's budget transparency that can range from 0 to 100 as follows: Extensive Information (81-100); Significant (61-80); Some (41-60); Minimal (21-40) and Scant or No Information (0-20).

The OBI 2012 scores are not impressive because the average score among the 100 countries studied is just 43. Romania's OBI index is 47, this means that is greater than the average, but this means that there are only some information available to public. Even so, regarding changes in OBI scores over subsequent rounds of the Open Budget Survey for the period 2006-2012 Romania is framed at the worst performers (a decrease in the OBI score from 66 in 2006 to 47 in 2012). Regarding the study about changes in the publication of budget documents Romania appears among the countries that started publishing pre-budget statements and mid-year review. According to the survey the documents available to the public are: Pre-Budget Statement, Executive's Budget Proposal, Enacted Budget, In-Year Reports, Mid-Year Review, Year-End Report and Audit Report.

We consider that at the level of the county councils and residences from the North-West Region the budget transparency should be increased, this can bring lots of benefits, such as: more responsibly actions of the elected officials knowing that their decisions and actions are opened for public analysis; more equitable public spending; growing quality of public debate and more stable and predictable environment for investment decisions.

## **6. Conclusions**

Both political and citizens should be aware of the benefits of budgetary transparency, translated into better budgetary outcomes due to the opportunity to monitor and asses the government's financial management. All these are possible with the political will from public officials, who, as we know from experience, can have different interests in withholding information. If the will exists it must be accompanied by legal and institutional frameworks that sustain budget transparency. With all these there are some aspects that shouldn't be forgotten. One of these is the fact that the majority of citizens have low budgetary literacy level is hard to communicate lot of technical information (such the one written in budgets and reports) and this makes difficult the engagement of citizen to budgetary process because they can't identify at a personal level the budget impact. The solution for this is building budget literacy among citizens that determines a growing engagement of citizens in the budgetary process.

Transparency is a term hard to define from the point of view of governmental requirements. It shouldn't be understood as simple access to public information, it goes beyond this, requiring for public information to be understandable to external

stakeholders. In the current global context budget transparency is the major pillar of good governance of public funds and is a reference tool for budget practices and procedures.

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# "THE KNOWLEDGE TRIANGLE" IN A KNOWLEDGE-BASED SOCIETY

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**Abstract:** *The knowledge-based society is the stage where mankind is found and aims to raise the living standards of population but also to increase the level of knowledge. To achieve this latter goal, the states of the world, and especially those in the European Union, must ensure an adequate funding for its realization, and therefore in 2011 it was decided at EU level the achievement of an Innovation Union, in which are to be involved all the European countries, while to stimulate and finance research and innovation the Horizon 2020 program was proposed. The results of the Program, an "Innovation Union" have begun to be felt, so in 2011, the major companies headquartered in the European Union increased their investments in R&D by 8.9% compared to 6.1% in 2010. This increase was almost equal to that of the U.S.A. companies (9%), higher than the world average (7.6%) and superior to Japanese companies (1.5%). The sectors that used the research-development activity have tended to have increases in employment above average. I believe this information highlights the fact that the European Union may become attractive for research-development and innovation investments even for businesses outside the UE, and this can result in jobs creation and increasing competitiveness of this field of the states of the European Union. In the introductory part of the article, I have briefly presented general notions of the three component activities of the "knowledge triangle", in the second part I presented the knowledge society with several features, in the third part, I showed some provisions of the program to stimulate research and innovation Horizon 2020, in the fourth part, I presented an innovation activity connection to private enterprise and entrepreneurial initiative stimulation in the field innovation, and the conclusions shows that research does not stop with achieving the objectives and finding the outcomes research, but is it the background for further research, especially in the context of a new economy", where innovation through knowledge is the most important.*

**Key words:** *research, innovation, financing, knowledge society.*

**JEL classification:** *E25, E26, O28, O31*

## **1. Introduction**

Scientific research is a creative activity, which aims to enhance the volume of knowledge, including knowledge of man, culture, and to use this knowledge to acquire new knowledge etc.

Nowadays the concept of scientific research is used under the name of research - development.

Research, development and innovation, together, form the 'knowledge triangle' and represent the engine of economic and social development. The common concerns of all countries, for scientific research and science, appear as recognition of their role in ensuring the welfare and human civilization.

In the current context, scientific research should, too, be seen in the light of globalization. In this area there are also real-world problems:

- science and research must take into account: the globalization of the economic life, the deepening of international division of labor, increased international relations, the limited resources and their uneven distribution across the globe, environmental protection and sustainable development of mankind;
- the need for scientific research is a serious problem and requires great efforts which sometimes cannot be supported by a single state;
- the sustainable development issues have to be solved from an international perspective. (Plumb I. *et al.*, 2007)

The innovation process requires specific skills, that is to seize market opportunities in conjunction with technological developments, to identify various technical solutions and so on, as well as abilities that are to be won by employees, managers or to be embedded into a business organization.

The success of a knowledge-base" society depends on the interaction with the business environment and the resources available in order to generate new products and processes. The mechanisms through which these objectives can be achieved are given by the innovation process itself.

Developed industrial countries have more or less from a "closed innovation system" to an "open innovation system". While the label "open" may include a number a factors (legal, economic etc.), developments of networks including public-private partnerships or university-industry links is a key element. (Maasen P. & Stensaker B., 2011)

## **2. The knowledge-based society**

Knowledge-based society is a formal association of people with common interests who seek to combine knowledge from specific areas of interest, thus contributing to knowledge. Knowledge as a result of perception, learning and reasoning, constitutes the major component of any activity and in particular, of the socio - economic ones. Activities in the spheres of economic, social, cultural and other human activities are highly dependent on information and knowledge, which represent results, but also raw material of these processes.

Society has always relied on knowledge, even if promoted by empirical methods such as observations and experiences that led to generalizations passed down from generation to generation. Mutations produced in contemporary society consists in the introduction of new technologies, which removes the barriers of space, transmission, storage, sharing and storing information and knowledge, providing a favorable environment for fertilization of ideas, leading to increased potential for knowledge generation and transformed it into the most important asset of contemporary society. (M. Muresan, 2011)

It is now a certainty that knowledge organizations emphasize, not only new phenomenology, but also induce a different view on how to conceive and practice management. Because new types of actors, but also roles, appear, because the typology of management practices is changing radically, it was found that the activities related to the production of knowledge (innovation), its dissemination (communication) and its acquisition (learning) are not compatible with an authoritarian leading or an hierarchical strict and comprehensive control.

On the contrary, their subtle character blurs the distinction between the formal and informal side, while, the outside official controls that became inoperative, are no

longer justified. In other words, the separation between management and execution is irrelevant because, as of now, the act of management focuses on developing problems of strategic vision and on facilitating coordinated action of relevant and cooperative actors, which are self-responsible, including in terms decision. (Popescu V.A. *et al.*, 2011)

The overall policy objective of the Lisbon strategy launched in a 2000 year was the transition of the European Union to a knowledge-based economy and society by a 2010 year. While this encompassing view implied a systematic approach, the European Knowledge landscape remains fragmented. The European Commission has been expressing the need to better integrate all the parts of the knowledge policy agenda for some time, noting in particular:

- the lack of innovation and entrepreneurial culture in research and higher education;
  - a lack of investment, in particular private investment, in research and development (R&D);
  - the difficulty Europe has in translating R&D results into commercial opportunities.
- (Hervás S. F. & Mulatero F., 2010)

Basic research is now carried out in a diversified institutional framework: universities, research institutes, companies and consortiums thereof. In some cases it can be transferred very rapidly in the correct application. On the other hand, it can lead to unexpected applications years later and in areas relatively distant from the original. Currently the private sector finances supports more than half and two thirds from research and technological development in Europe. Private investment in research and development in Europe, after a relative decrease, register again, an increase in the recent years. Multinationals and international investments have remained high and even increased. Due to globalization of the economy, these companies have developed strategies for research and development on an international scale, with alliances, mergers and acquisitions that have increased in each sector.

It follows that investment in research and development from the private sector in Europe is lower than that of competitors in the United States and Asia, due, in particular, to lower research efforts of SMEs. In Europe, these trends are essentially represented by the companies that make or use technology and whose future depends on their own capacity to develop. But, only a limited number of small businesses exploit the potential of high technologies, while establishing companies that sell the results of research and development is still at low levels in Europe.

On the other hand, European financial market did not sufficiently discovered the economic value of investment in knowledge. Even if it started to grow, the amount of venture capital focused on innovation is still limited in Europe. Such capital investment in the high-tech sectors and in the creation of such companies is much lower than in the U.S. So the climate for private investment in research in Europe needs, greatly, to be improved. (Popescu D.I. *et al.*, 2006)

The concept of knowledge society is used interchangeably with the knowledge-based economy (knowledge-based economy). The two concepts are related but not identical. Intensive use of knowledge, including knowledge generating, is the essence of some economic processes that have resulted. On the other hand, "society" is a more comprehensive framework than economy and progress towards the knowledge society will have, beyond the economic effects, the consequence of a better realization of the human personality. (Plumb I. *et al.*, 2007)

The relationship between Knowledge investments, innovation and competitiveness is an important topic in both academic research and economic policy and has been

studied extensively over the past decades. Nowadays, investments in private and public R&D are believed to make up the heart of a modern knowledge economy in a knowledge-based society. (Van Hemert & Nijkamp P., 2010)

### **3. „Horizon 2020” programme for research and innovation stimulation**

European Union in the context of the transition to the knowledge society aims to provide a framework for a smart, sustainable and inclusive growth. Knowledge society and innovation involves the integration of new technological infrastructure, the processes of research, development and innovations, as well as the educational ones, contribute directly to the development of intellectual capital, the main resource of current society. Knowledge generation, based on stimulating the use of intellectual capital is the key factor to increase competitiveness, to ensure sustainable growth and to increase social integration level. To achieve these strategic objectives, the European Union stated some precise targets. Because research and innovation targets set for 2020 includes the 3% of GDP for supporting this field, and for the field of education represents the diminishing school dropout to below 10% and the increasing number of tertiary graduates in the age group 30-34 years to 40% of the total population.

EU strategy provides better exploitation of the potential of economic growth, having as main priorities: research, development and innovation, as well as improving the educational process. The specific program for the research and innovation (Horizon 2020) provides:

- ✓ transforming the European Union into an Innovation Union;
- ✓ improving cooperation between the business environment the academic one by creating „Alliances based on knowledge ”;
- ✓ creating new partnerships between universities, research entities and companies in the business sector (communities based on knowledge and innovation);
- ✓ improvement of research and innovation systems, especially of private ones.

The strategic framework on research and innovation 2014-2020 is correlated with the Union Strategy for 2020, following: ensuring excellence in science, providing industry leadership (including active support for the SMEs), providing an adequate response to societal challenges. To finance the „Horizon 2020” program, funds worth 80 billion are provided to implement these policies, which demonstrates their importance. (European Commission, 2011)

### **4. Stimulating entrepreneurial initiative**

In times of rapid technological change, the need to prevent technological accidents at all stages (research, experiment, industrial use, consumption) should be well balanced with the need to maintain the pace of development and not to increase the already high costs of the more radical innovation.

Trade agreements between countries can have, also, lasting consequences for the locations of new industries. Mobilizing private finance for innovation system depends largely on the sophistication of financial market mechanisms for risk assessment of failures cost innovation and presentation. In most countries these market mechanisms are still immature. This creates financial bottlenecks that affect more advanced innovations that go beyond market borders, than the modest, incremental, innovations.

Resources released by these blockages can launch new businesses, so to resume the business cycle. This creates a challenge for governments, especially in countries where entrepreneurship in large business organizations and / or "governmental entrepreneurship" have traditionally played a leading role in the generation and exploitation of technological progress.

The main conditions that must be fulfilled for the entrepreneurial engine to operate efficiently are:

- A financial education;
- The proper functioning of the products;
- An appropriate regulatory framework for business: creating, trading, closing businesses,
- Development of entrepreneurial training and management skills;
- Facilitate SMEs' access to new technologies and information.

Financial markets can provide value and appreciation to the specific knowledge of the company, to a certain extent by share price, but this do not evaluate good the intangible assets. Labor market assigns value to knowledge embedded in individuals, certificates of education and training systems through awarded higher wages or business opportunities.

Another concern is the interactions between labor market and social esteem for determining long-term effectiveness, efficiency of human capital, regarding the formation and its allocation on the attractiveness of engineering or scientific careers. Government can intervene through its macroeconomic management: interest rate has an impact on the current value of knowledge embedded in capital goods and, more generally, on private investment in long-term research. Thus, when production is financed as a public good, is supported and researched as good for business and training, infrastructures that increase the profitability of some private investment in knowledge are achieved. (Popescu R., 2007)

## **5. Conclusions**

Scientific research should not be regarded as definitive completed once obtaining final results. They concern, as task, as achievement for the moment, only reaching the objectives pursued at the beginning of research. But beyond these targets are foreseen other matters, most of which are new, that appear as possible and / or necessary future research topics. Because of this, research results can be used either immediately applied in a practical sense or in a theoretically sense. In the latter case, they will be prerequisites for future research. (Gheorghe I. G., 2008)

At this point mankind is in the third revolution that is driven by THE knowledge-based service sector. Although, over time, the laws of economics have not changed, however, the economy itself has changed in a fundamental way. There are several important aspects of the knowledge economy, which is also called, „the new economy“, that are different and are marked differently from, „the old economy“. These differences between the two as „economies“ can be compared with the differences that led to the transition from the agrarian economy of the nineteenth century to the twentieth-century industrial economy. Thus, if in the industrial economy capital was more important than land, in „the new economy“ innovation through knowledge is the most important aspect. Currently most aspects of the economy are characterized by it. In the global knowledge economy, the advantage of some nations over others will result, not only from the use of natural resources

owned or by cheap work force, but also from their ability to assert their intellectual capital.

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# THE PRO AND CONS OF THE NEW TREATY ON STABILITY, COORDINATION AND GOVERNANCE IN THE ECONOMIC AND MONETARY UNION

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**Abstract:** *In our study, using a descriptive research methodology based on survey and data interpretation, we are trying to state our opinion regarding the pro and cons of the Fiscal Compact, wheather our country made a step forward towards fiscal stabilization or a step backwards towards the space for manouver of the fiscal policy. Stability and Growth Pact, signed in Amsterdam in 1997, maintained the two limits set by the Maastricht Treaty, signed in 1992, namely those set within 3% of GDP for budget deficit and 60% of GDP for public debt, and established at the same time the regulatory framework for the coordination of national fiscal policies in the EMU. Medium-term objective, enshrined in the Stability and Growth Pact, is for the budgetary position of the Member States of the euro zone to be "close to balance or in surplus" – and to enable them to deal with normal cyclical fluctuations without exceeding effectively the 3% of GDP budget deficit. Achievement of the medium-term objective requires rapid evolution towards a sustainable situation, able to generate sufficient fiscal space for the promotion of discretionary fiscal policy measures - such as those embodied in the increase of budgetary allocations for investments in infrastructure.*

**Keywords:** *budget deficit, public debt, fiscal rules, restrictions, automatic fiscal stabilizers*

**JEL classification:** *E32; E62; H61.*

## 1. Introduction

Maximum limit of 3% of GDP for the budget deficit - included in the Stability and Growth Pact – is a limit that can not be reached every year, but the high level which can not be exceeded even in adverse economic conditions.

Thus, in periods of **economic expansion**, the total value of income taxes and social contributions mobilized at consolidated state budget increase - due to increasing the size of the base of calculation of tax or contributions, without implying any change in the fiscal policy or growth of the collection of taxes and social contributions. At the same time, the total volume of various monetary compensations and payments for unemployment allocations decreases and the result of these developments is that *the actual budget deficit is reduced or even a positive budget balance (surplus) is achieved.*

*Ensuring an adequate budgetary position, which is not dependent on cyclical fluctuations in the economy and can be capped at 3% of GDP for the actual budget deficit even during economic recession, becomes essential for compliance with the Stability and Growth Pact stipulations and achievement of a sustainable fiscal position in the medium and long term.*

Because of the extension of economic recession in many Member States of the euro zone, in order to strengthen the surveillance of budgetary positions and coordination

of economic policies, after several meetings of finance ministers, prime ministers and heads of state, on 2 March 2012 (i.e. after nearly 15 years of operation of the Mechanism of Stability and Growth), 25 of the 27 Member States of the European Union - with the exception of the United Kingdom of Great Britain and Northern Ireland and the Czech Republic - signed the **Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (EMU)**. In the structure of this Treaty, the most important component is the **European Fiscal Compact** aimed at *strengthening fiscal discipline in Europe* by introducing penalties to be applied "in a more automatic manner" and a stricter supervision.

Unlike the **Stability and Growth Pact (SGP)** - medium-term objective of which was that budgetary positions of euro zone Member States to be "close to balance or in surplus", the new treaty includes the requirement that **national budgets "should be balanced or in surplus"**, and this requirement will be met if the annual structural deficit does not exceed 0.5% of GDP. This "rule of a balanced budget" should be introduced into national legislation, preferably at constitutional level, within one year of the entry into force of the Treaty - which will happen after it is ratified by at least 12 Member States of the Economic and Monetary Union, becoming afterwards mandatory for all members of the EMU. Other Member States of the European Union will come under the provisions of the Treaty on the adoption of the single currency or earlier if requested to do so.

If a member state has a public debt significantly below 60% of GDP and the risks to long-term sustainability of public finances are reduced, it is allowed to have a structural budget deficit of more than 0.5% of GDP, but not more than 1% of GDP. Failure to meet this requirement regarding the structural deficit will trigger an "*automatic correction mechanism*" – which shall be determined by each Member State on the basis of principles proposed by European Commission.

The authority responsible for monitoring compliance with this rule of a balanced national budget or in surplus is the **European Court of Justice**; its decisions are binding, and the failure to respect them can be followed by fines of up to 0.1% of GDP for Euro zone member states to be paid to the "European Stability Mechanism".

## **2. Structural Budget Deficit and the Impact of Discretionary Fiscal Policy on Aggregate Demand**

The real budgetary position or fundamental fiscal position, as stated in the Report of Fiscal Council of Romania for year 2011 (*Annual Report of the Fiscal Council for 2011. Macroeconomic and budgetary developments and prospects, 2012*) contains the data needed to calculate the budget balance adjusted cyclically or structurally, which is obtained by deducting from the actual budget balance the effects of the economic cycle on the general consolidated budget.

In this context, the structural deficit is defined as the size of budget deficit that would be recorded if GDP was at its potential level or could be recorded without the influence of the economic cycle.

Actual budgetary position has two components, depending on the factors causing them - temporary and permanent factors - and the determination of the structural budget deficit is based on the identity:

Actual Budget Deficit = Cyclic Budget Deficit (as effect of the action of automatic stabilizers) + Structural Budget Deficit (result of the discretionary fiscal policy)
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Cyclically adjusted budgetary balance represents the most important reference point for defining the objectives of a state's fiscal policy, providing premises for action to reduce economic fluctuations due to automatic stabilizers' influence and, consequently, long-term sustainability of public finances.

Automatic stabilizers action points out that evolution of tax revenues and social security contributions is interrelated with their position in the economic cycle, to which the change of size of some categories of budget expenditures is added and the effect is abatement of cyclical fluctuations.

As mentioned above, in the event of economic expansion, budgetary revenues related to direct taxes (profit tax, dividend tax, income tax, tax on buildings owned businesses) and indirect taxes (VAT, excise duties) as well as social contributions collected by the state are increased, and the result is the relative decrease in the population and economic operators' level of income which reverberates on the solvable demand that goes down, effects being the mitigation of the economic growth and the return of GDP at its potential level.

Conversely, when economic recession is installing, revenues such as those mentioned above are smaller, and budget expenditures for support allocations, various monetary compensations for dismissed employees and unemployment payments increase, with positive impact on income remaining available to economic operators and population, favouring overcome of recession and return to economic growth and GDP reaching its potential level.

Undoubtedly, the effectiveness of automatic stabilizers' action depends on the size of government sector and the elasticity of budgetary incomes and expenditures in relation to the cyclical fluctuations of the economy. Thus, it is doubtless that the larger the dimensions of government sector, the more extensive is the variation in budgetary revenues and expenditures in relation to cyclical fluctuations of the economy and the dampening effect of these fluctuations like a result of the automatic stabilizers' action is higher.

In the last three years, the global economic crisis has highlighted that in terms of important shocks of aggregate demand, monetary policy is unable to respond with significant impact on economy, if the transmission mechanism is blocked by the conditions existent on financial markets. In this case, if there is an appropriate fiscal environment, is required to be promoted and expansionary discretionary fiscal policy, although some disadvantages are associated to it, with reference to: requirement for a relatively long implementation period; high intensity of political influences; lack of automatic reversal when the position in the economic cycle changes.

Automatic stabilizers do not have these disadvantages, but, as mentioned in some of the specialized literature (Cottarelli and Fedelino, 2009), (Baunsgaard and al., 2009), their effectiveness increases when the importance of government sector grows or if the progressive of taxation goes higher.

After reviewing the Stability and Growth Pact in 2005, the cyclically adjusted budget deficit has become the focus of fiscal surveillance mechanism of the European Union - in the sense that the key requirements imposed on EMU Member States in matter of fiscal policy are expressed in cyclically-adjusted and net values of temporary or single ("one-off") measurements.

Using the cyclically adjusted budget deficit concerns both the sustainability of public finances and the impact of discretionary fiscal policy on aggregate demand due to fiscal stimulus (which is calculated as the annual change/deviation of the structural deficit compared with the previous year's one). Thus, a positive fiscal impulse, corresponding to an increase in the structural budget deficit, reflects an incentive fiscal policy - embodied in reducing taxes and increasing the size of budgetary expenditures, while a negative fiscal impulse, which corresponds to a reduction of the structural budget deficit, indicates a restrictive fiscal policy - characterized by raising taxes and reducing the size of government spending. Taking into account the cyclical position of the economy, it can be assessed whether fiscal policy acts as macroeconomic stabilizer - to reduce pressure on aggregate demand during periods of economic expansion or to stimulate aggregate demand during economic downturns.

According to the identity mentioned in the first part of the paper, the budgetary deficit in structural year  $t$  (or CAB $t$ , "Cyclically Adjusted Budget  $t$ ") is obtained by subtracting the cyclical component (CC $t$ ) of the actual budget deficit (or budget balance - BB $t$ ), corresponding to the relationship:

$$\text{CAB}t = \text{BB}t - \text{CC}t = \text{BB}t - \varepsilon\text{OG}t \quad (1)$$

Structural budgetary deficit is the tax position in which the GDP is at its potential level, i.e. when the economy is midway between an economic "boom" economy and a recession in economy (Dumitru, 2012).

The size of the cyclical component of the actual budget deficit is given by the effective output - gap (OG) - which represents the percentage deviation of actual GDP from its potential level, multiplied by the cumulative sensitivity parameter of budgetary income and spending ( $\varepsilon$ ) at the change of economic activity's volume, estimated with econometric models.

For Romania, the sensitivity parameters were estimated as: 0.28 for revenues and 0.02 for budgetary expenditure, resulting a total sensitivity parameter ( $\varepsilon$ ) equal to 0.3 (Larch and Turrini, 2009). Estimating the structural budget deficit is made, either based on the Blanchard methodology (Blanchard and al., 1990) – consisting in the direct estimation of cyclically adjusted revenues and expenses by using regression analysis, or using the alternative methodology proposed by Carine Bouthevillain and all in 2001, which shows that estimation of budgetary components' elasticity is made by reporting directly to the relevant macroeconomic bases (GDP, private consumption, government consumption and so on) rather than output - gap, thus taking into account the changes that occur in the structure of aggregate demand and revenues.

### **3. Analysis of the actual deficit trend and structural budget deficit for Romania in the period 2006-2011**

In Romania, the actual balance of consolidated state budget for the period 2006 - 2011 was negative, registering an annual budget deficit, as shown in Table. 1.

**Table 1:** Evolution of Romanian GDP and budgetary aggregates, during the period 2006-2011

- Mil. Lei and % -

Nr	Name		2006	2007	2008	2009	2010	2011
1	GDP		344.651,0	412.762,0	514.654,0	491.007,5	511.582,0	563.100,0
2	Budgetary Revenues	abs. val.	106.975,3	127.108,2	164.466,8	156.624,9	168.674,2	181.566,9
		% of GDP	31,04	30,80	31,96	31,90	32,97	32,24
3	Budgetary Expenditures	abs. val.	112.626,3	136.556,5	189.121,5	193.025,5	202.282,0	210.054,0
		% of GDP	32,68	33,08	36,75	39,31	39,54	37,30
4	Actual Budget Deficit	val. abs.	-5.651,0	-9.448,3	-24.654,7	-36.400,6	-33.607,8	-28.487,1
		% of GDP	-1,64	-2,28	-4,79	-7,41	-6,57	-5,06
5	Cyclic Component of State Budget	% of GDP	2,10	0,70	3,80	-0,60	-0,83	-0,61
6	Share of Structural Budget Deficit in GDP	% of GDP	-3,74	-2,98	-8,59	-6,81	-5,74	-4,45

Source: Ministry of Finance reports on the consolidated general budget during the period 2009-2012, Convergence Programme 2009-2012 and own calculations.

As can be seen from the data presented in the Table, the evolution of budgetary revenues, in absolute value, is increasing during the period (excluding the drop in 2009) - from 106 975,3 million to 181566,9 million, with share in GDP ranging from 31.04% in 2006 and 32.24% in 2011 – which are some of the lowest percentages in the EU, as shown in figure 1. Increase in the absolute amount of budget revenues totaled 74591,6 million lei at the end of 2011, being with 69,73% over the revenues from December 31, 2006.

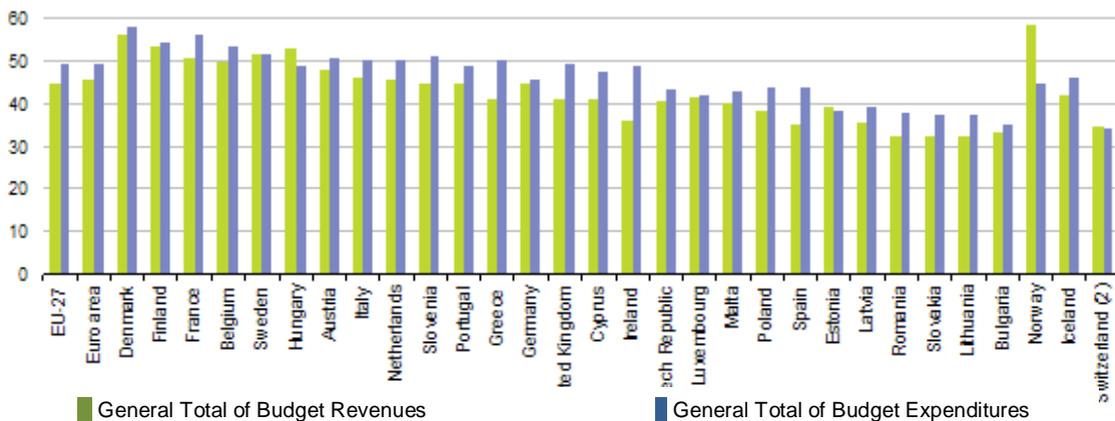
Budget expenditures increased constantly during the period - from 112626,3 million in 2006 to 210054,0 million in 2011 (with an increase in absolute amount of 97427,7 million, i.e. 86.51% ) and shares in GDP increased from 32,68% in 2006 to 39,54% in 2010 (the "top" period) and, respectively, to 37,30% in 2011. These percentages in GDP, as those revenues are among the lowest in the EU, as shown in Figure 1.

The size of the actual budget deficit has recorded significant annual increases, in nominal terms, during 2006-2009, with 67,2% in 2007 compared to 2006, with 160,94% in 2008 compared to 2007 and 47,64% in 2009 compared to 2008.

Most significant increase in the size of actual budget deficit was recorded in 2008, compared to 2007 (with +15206, 4 million, i.e. .160.94%), but the "top" of the actual budget deficit was recorded at the end of reporting period 2009 (-36400, 6 million, accounting for 7.41% of GDP - which is the highest of the period).

In 2010, under the impact of fiscal stabilization measures undertaken by government authorities, the budget deficit was stopped, being registered a decrease of 7.67% of it, in nominal terms, compared to 2009.

In 2011, the general consolidated state deficit fell to 28487,1 million lei, with 5120,7 million lei (15,24%) compared to 2010, reaching to 5,06% of GDP.



Data from 23.04.2012, arranged in descending order by total average of income and expenditure.

**Figure 1:** Share of budgetary revenues and expenditures in GDP, within EU-27, Euro Zone, and Member States of the EU-27, Norway, Iceland and Switzerland.

Sursa: [http://epp.eurostat.ec.europa.eu/statistics\\_explained/](http://epp.eurostat.ec.europa.eu/statistics_explained/)

Budget balance at the end of 2011, *is however distorted* by the impact of clarifying the statistical treatment of Romanian state obligations to several categories of employees in the public sector, which were decided by court rulings. Thus, in the implementation of ESA95 of the general consolidated state budget were included additional expenses in the amount of 6400 million lei (1,1% of GDP), with corresponding increases in the budget deficit - both in nominal expression and as a share of GDP. In the absence of this temporary measure, the general state deficit (according to ESA95) would have been significantly lower than the target set in the Convergence Programme 2009-2012, prepared by the Government and adopted in April 2011 (4,9% of GDP) and below the level included in the Memorandum of Understanding with the European Union (under 5% of GDP), reaching a level similar to cash basis (4,1% of GDP). Elimination of the ordinary differential cash-accrual is explained mostly by the fact that a significant proportion of payments made towards the end of 2011 were for settlement of the arrears belonging to state-owned companies and the public health sector. Under a negative cyclical component (-0,61% of GDP), 87,94% of the actual budget deficit in 2011 is structural, reflecting the spread of fiscal consolidation measures introduced in mid 2010 and a further reduction the number of employees in the public sector. As a percentage of GDP, the actual budget deficit recorded values in continuous increase in the period 2006-2009, from a low of -1,64% in 2006 to a level of -7.41% in 2009. In 2010, the budget deficit actually decreased compared to 2009, but remained at a considerable value, representing -6.57% of GDP.

The following year, 2011, the actual budget deficit was further reduced, but its share in GDP remained still high, being 5,06%.

Doubled by a "twin" deficit of the current account, deficit of the general consolidated state budget may represent in the coming period a factor with negative impact on overall macroeconomic stability of the country.

It must however be noted that *the level of budget deficit is strongly influenced by the position of the economy in relation to the business cycle.*

Even a low deficit can hide serious imbalances in fiscal position to the extent that is due to an increase of budget revenues obtained by over stimulating the economy.

Therefore, it is necessary to balance the public budget over the economic cycle.

In this respect, a particularly important indicator is **the structural budget deficit**, based on the assumption that the current size of the budget balance is the result of the influence of factors with both permanent and temporary action.

Considering the cyclical component of the budget balance, which had positive values in the years 2006-2008 and, respectively, negative ones in the next three years, except in 2007, it results that in the remaining five years of the period, the share of structural deficit in GDP exceed 3% of GDP, *indicating a relaxation of fiscal discipline.*

The increase of actual and structural budget deficit was due to an increase almost "exuberant" of public spending (which evolved increasingly from 32,68% of GDP in 2006 to over 39% of GDP in 2009 and 2010 and, respectively, 37.3% in 2011), and based on the relative stability of revenues that only in 2010 were close to 33% of GDP (32,97%). During 2008 and 2009, the structural budget deficit increased significantly from a level of -3,74% of GDP in 2006 to a high of -8,58% of GDP in 2008 and to -6,81 of GDP in 2009, *as a result of inadequate fiscal policy pursued by government authorities.*

This high rate of structural budget deficit in 2009 (-6,81%) is mainly the result of divergent evolution of revenues and expenditures. Thus, budget expenditures increased by 3.904 million from the previous year, reaching a share of 39,31% of GDP while revenues of 2009 decreased from the previous year with 7841, 9 million, representing 31,90% of GDP. These divergent developments of 2009 **led to recording the maximum effective budget deficit of that period**, with a percentage of -7,41% of GDP and a structural component of -6,81% (representing 91,9% of the actual budget deficit). Obviously, in 2006-2008, a period of expansion of the economic cycle, **it was necessary to promote a countercyclical fiscal policy and not a pro-cyclical expansionary fiscal policy.**

The efforts of fiscal consolidation undertaken by the government in 2010 caused the further downward trend in the structural budget deficit, reducing it to a level of -5,74% of GDP at the end of 2010 and -4,45% at the end of 2011.

These efforts should be appreciated in terms of the tolerance or indulgence that was shown by the employees in the public sector and pensioners who have been their incomes "cut"! But we should not overlook the fact that *European authorities have initiated the procedure of excessive budget deficit for Romania*, requiring that, by the end of 2012, the actual budget deficit to fall below 3% of GDP.

Structural budget deficit is a particularly important indicator regarding the sustainability of the fiscal policy implemented by government authorities.

Since the growth of structural budget deficit is likely to lead to growth of unsustainable debt (Talpos and al., 2007), (Talpos and al., 2009), the evolutions

presented above should be an interference signal for a proper intervention of government authorities.

The changes occurring in the structural budget deficit's size provide at the same time information on the extent of stimulating aggregate demand through fiscal policy, and on the degree of fiscal consolidation.

The analysis of the structural budget deficit's dynamics correlated with the position of the economy in the economic cycle allows assessment of the extent to which the fiscal policy acts as a stabilizer or, conversely, in the sense of exacerbation of imbalances.

In Romania, in the period of rapid growth before the financial crisis (2006-2008), the fiscal impulse was positive (+2.1, +0.7, +3.8) contributing to the over stimulating of the economy and thereby increasing the imbalances accumulated the economy (*Annual Report of the Fiscal Council for 2011. Macroeconomic and budgetary developments and prospects*, 2012).

In addition, the pro-cyclicality of fiscal policy during the pre-crisis economic upswing *has exhausted the fiscal space necessary to stimulate the economy during the recession that followed*, the and the need to reduce the budget deficit during the crisis (primarily due to funding constraints) has inevitably *led to maintaining the pro-cyclicality of fiscal policy*. Thus, the automatic, beneficial and stabilizing action of cyclical budget deficit (automatic stabilizers) *was canceled by the pro-cyclical discretionary fiscal policy*.

The structural budget deficit decreased from -6,81% of GDP in 2009 to -5,74% and -4,45% of GDP During 2010 and 2011, the rate of adjustment being a very fast one; at the same time, we must bear in mind that the starting level was high (-8, 59%), which required the rapid adoption of decisive measures to ensure the sustainability of fiscal policy.

Adjustment was made mainly on the expenditure side, the structural reforms being promoted particularly in the fields of budgetary personnel's remuneration, the public pension system and budgetary programming. In terms of budget revenues, the most important measure was the increase in the standard VAT rate from 19 to 24%, starting from July 2010. The estimated cumulative adjustment for 2009-2012, undertaken by Romania is considered *to be the third most ambitious in the European Union*.

#### **4. Conclusions**

We believe that the major con for the new Fiscal Compact is generated by the restrictions imposed thus contributing to the narrowing of the space for maneuver of fiscal policy by limiting structural deficits. Also, referring the means of financing the budget deficit, there has been *an increase in recent years of the relative importance of recourse to domestic financing in the short term*. High aversion to risk of commercial banks in the Romanian banking system has led to their substantial involvement in this process, with the immediate consequence of reducing the funds available for lending financial operators.

The important effect of crowding out of public credit on private investments is confirmed by the perception of economic operators who consider the problem of access to financing as the main constraint the Romanian business environment is facing, also, the consumption behavior of the households is being distorted by the premises of those changes.

We consider that by signing the Fiscal Compact, our country has made a statement towards fiscal discipline thus becoming virtuous in the eyes of the foreign investors, this being the most important pro that we can identify. The full impact of this gaining in the image and credibility chapters is yet going to be felt on a medium and long term.

## 5. Acknowledgements

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***SUB-SECTION: CORPORATE FINANCES***



## WEATHER DERIVATIVES: THE MOST COMMON PRICING AND VALUATION METHODS

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**Abstract:** *In recent years , weather derivatives have become a common tool in risk management for sectors as: agriculture, energy, sports, etc. This is based on the fact that there is no unique way to determine the value and price solutions that would be generally approved by all market-participant. Not as in the case of the Black-Scholes formula for options on non-dividend-paying stocks, thus weather derivatives valuation being the source for a constant debate between academics and practitioners. One looks for fair and truly correct prices that include all factors, while the others search every-day applicable solutions that help transactioning. To be honest... this is somehow like alchemy. This paper's purpose is the examination of statistical characteristics of weather data, data clearing and filling techniques. The study will be referring to temperatures because that is the best analyzed phenomenon, being the most common. This was also heavily influenced by energy companies and energetic interests, because the degree days were of interest ever before weather derivatives were put for sale. The main ideas are explaining what ways of pricing and valuation are put into perspective for this financial instrument, taking into consideration that the Black-Scholes Model is not suitable, mainly cause the lack of historically correlated and uniform data. Also here, we will present the pros and cons that we found for each method. The methods are: the Burn analysis, the index value simulation method (IVSM), the daily simulation method (DSM). On the hole, this paper wants to shed light the weather derivatives pricing methods that are a mix of insurance pricing method and standard financial modeling methods. At the end we will prospect the discounting problem, by means of the Consumption based Capital Asset Pricing Model (CCAPM). This is all done empirically due to the fact that on the Romanian market these products are not yet used for either insurance or investment purposes.*

**Keywords:** weather derivatives, pricing, valuation, burn analysis, DSM, IVSM

**JEL classification:** G22, G24

Weather derivatives are financial "means" that can be used by companies or/and individuals as part of a risk management strategy to lower risk of adverse or unexpected weather conditions. The difference from other derivatives is that the underlying asset (represented by rain/ temperature/ snow) has no direct value to price the weather derivative on [The use of the black-scholes model in the field of weather derivatives, Horia Mircea Botoș, Cristina Ciumas, UBB Cluj, IC. EMQFB 2012, Tg Mures].

It is natural to assume a mean-reverting model for the weather. As with interest rates, it is unlikely that the weather next year will be 10 times higher than the weather this year.

The most important difference between interest rate derivative models and models for weather derivatives is the calibration process. Interest rate derivative models are calibrated to the market prices of liquid instruments, while weather derivative models are calibrated to past data. So far, an mature, active and liquid market does not yet exist for weather derivatives. On the other hand, we have a wealth of historical weather data. We are determining the parameters for which the probability of having generated the observed data is maximal.

The most common methods put forward for a efficient process of pricing and valuating weather derivatives are: the Burn analysis, the index value simulation method (IVSM), the daily simulation method (DSM).

Description of these methods will show that the mix origin of weather derivatives, of insurance and financial instrument, manifests its self even in pricing. This puts into perspective the frequent use of the Consumption based Capital Asset Pricing Model (CCAPM), when addressing them.

### **Temperature statistical characteristics**

In my studies until this point an action that seemed logical but rarely took place is *natural* hedging. But when it comes to weather this imply the question if risk can be better foreseen by a diversification and spread of the geographical coverage of the business. In a try to record correct and adequate features of temperature, many papers and companies study correlations between cities and/or countries. Such a paper is the one of Cao and Wei in 2004, and the result were impressing. They stated that by widening the geographical coverage, the risk diversification is very low, almost null, when it weather phenomena's. Cao and Wei computed the numbers for the USA, and Ferrer Garcia and Sturzenegger for Europe, the result being the same. As an example the correlation of temperatures in New York and Philadelphia is of 0.9853, thus showing that only 2.9% of temperatures changes in New York are correlated with changes taking place in Philadelphia. There study show that the lowers correlation was of 0.8443, between New York and Dallas that was still high. The same study in Europe had similar results. Correlations between countries in Italy, Napoli- Milano was of 0.9536. General correlations between temperatures in France and the Swiss was of 0.99, while between Switzerland and Great Britain were 0.9671. A later study show that the correlation between New York and London was 0.9531. The conclusion arising from these figures is that temperature diversification can't be internationalized, this it is recommended that's markets the use of weather derivatives.

Given the basic temperature properties registered at different location and intervals (times), explains the use of the DSM, that incorporates an adequate track of these processes:

- a) Warming trend: Meteorological research shows that it is possible that climatic trends to be cooler or warmer over time. Weather stations, generally register just warming trend because of constant city expansion. This phenomena is called "the heat island effect" and caused by the heat-storing properties of construction materials. This means that CDD[Cooling degree days] levels will rise over time, while the HDD[Heating degree days] level

will decrease. The more energy-efficient are the building materials, the closer the two values will be.

- b) Seasons: Temperatures have a sinusoidal pattern, caused by the seasonal variations. This is visible without any data processing by just looking at the data
- c) Heteroscedasticity: temperature has a stochastic volatility, which is more visible in winter than in summer.
- d) Auto-correlation: temperature patterns are strongly auto-correlated. For short lags the correlation is near to 1, afterwards decreasing visibly. This auto-correlation is significant and visible for lags of 365 units or multiples of it.

All the points made until now show that the historical data describe future outcomes are at the basis of the process of valuation and pricing for weather derivatives, but this can cause problems for the dealer when data sets are incomplete or display errors.

Temperature data sets can be obtained from a large variety of providers, but we would recommend the ones obtained from the national meteorological institutes. This because the data is more objectively recorded and the institutes are incorruptible in their recordings. Raw data sets are more affordable and easier to be put into research structures, while the cleaned data are expensive and, some times, less relevant because of their alterations. The data cleaning methods for weather data are not made public, but the standard methods put into practice on the raw data also provides relevant information.

Scientists have put into perspective that the Principal Component Analysis (PCA) outperforms other techniques, the Fallback Methodology being the second method recommended. But practitioners, and also Chicago Merchant Exchange, prefer the Fallback method (results are also easier to be come across when there are values missing).

### **The Black Scholes Model**

There are a lot of reasons why the Black Scholes model does not work. Firstly, weather underlying factors are not tradable or storable, thus a riskless portfolio cannot be built. Another motive why the BlackScholes equation fails there is heteroscedastic nature of weather and, we must take into account that, indexes are summations of previous actual weather outcomes. The degree days indexes are an accumulation of average daily temperatures, making them similar to Asian derivatives.

More details about this subject can be seen in one of the authors previous works.

### **The Burn analysis**

This method is sometimes referred as actuarial pricing. The model starts from the assumption that future temperatures can be predicted using just historical series of recorded temperatures. Computing security paid in the past and averaging pay offs in the last years, the buyer can estimate the expected profits at maturity. To presume that future gains can be determined from past performances, we need a lengthy data set, the problem being that this is susceptible to frequent errors. Cao and Wei demonstrated in one of their studies that payoffs almost quadruple switching the data set from 10 to 20 years. This reassess the question: who do we determine the right historical length. Hard to answer.

An element that we must take into account is statistical power and representativeness. Long term data sets smoothes out extreme events and give more information, short or medium sized data sets distort trends. As in the case of any financial transactions, one has to try to see the potential indicators of change of local effects. This present raised importance when pricing short term derivatives. Predictions here should include forecasts and shorter data sets. The length of a data set is a matter of definition, but all industries prefer to study the last 10-20 years. After the payoff is foreseen, the next point of interest is the actual price adjusted with a discount factor, as seen the in formula:

$$P_t = \frac{E^P(F[WI [t_1, t_2]])}{(1 + r_f + RP)^{t_2 - t}}$$

where:

$P_t$  = price of the derivative in "t"

F = payoff outcome index function

$E^P(F)$  = Cash-flow at maturity under the P-measure

P = historical measure

$r_f$  = risk free rate

RP = risk premium

An investor can be compensated for the risk loading through the weather derivative, this not being diversifiable. this means that when 2 diametrically opposed positions meet, the risk is fully diversified and no risk premium will be covered. Risk premium has to be negative or zero, thus the writer of the security accepts the inherent risk of any temperature outcomes. Premium size depends on the margins put into discussion, plus the bargaining power of the two parties involved( these two manifest an information asymmetry that can tip the balance into ones favor). The risk premium helps with the determining of the price risk is hard to determine:

$$\lambda \cdot \sigma = \mu - r_f$$

where:

$\lambda$  - market risk price for weather indexes  
 $\sigma$  - volatility of the weather indexes

$\mu$  - drift term governing the index stochastic process

As we take into account the rate sensitive derivatives, which have a lot in common with weather derivatives, a risk free portfolio would have to contain only two derivatives, with the same maturity and the same underlying subject, same weather station, same phenomenon. This is high improbable to be possible to make, specially taking into consideration OTC-Market data.

Now that we explain the perspectives on the Black Scholes Model and the Burn Analysis, let's take a look, at the more complex IVSM and DSM methods.

### The index value simulation method

The index simulation method (IVSM) presumes that the underlying index distribution under the Q-measure is sufficient to determine the maturity price for weather derivatives. The core of the method is molding the historical data into a distribution having the form and structure like a normal distribution in order to determine future developments.

With enough data available, we can make the distribution of the weather index like a degree days graph. The purpose is to transform it later on into an risk neutral measure in order to determine the risk free rate as the discount factor when computing the expected payoffs.[ Schirm, A, "Wetterderivate - Finanzmarkt produkte fir das Management wetterbedingter Geschäftsrisiken". Finanz Betrieb 11/2000,2000]

The discount factor would no longer incorporate an impending risk premium, but revealing that it would contain only the risk free rate. The expressed price takes the form:

$$P_t = e^{-r_f(t_2-t)} * \int_{-\infty}^{+\infty} F[WI[t_1, t_2]] * dQ'[WI[t_1, t_2]]$$

where: Q` = density of Q

In the use of the normal distribution, books recommend the Jarque-Bera to be done. Plots can also be used to test goodness. The graphic tools are intuitive, they compare data sets CDF to the Empirical CDF (cumulative distribution function). What results is:

- the PP plot: in the comparing of the Empirical and resulting CDF and then make a graph manifest great problems due to its S-shape. This model takes into comparisons the CDFs by their graph form: is the model works, it manifests as a straight line, slope towards 1, and intersecting 0. If the line does not intercept 0, the mean is wrong; a difference from 1 of the slope indicates a wrong volatility.

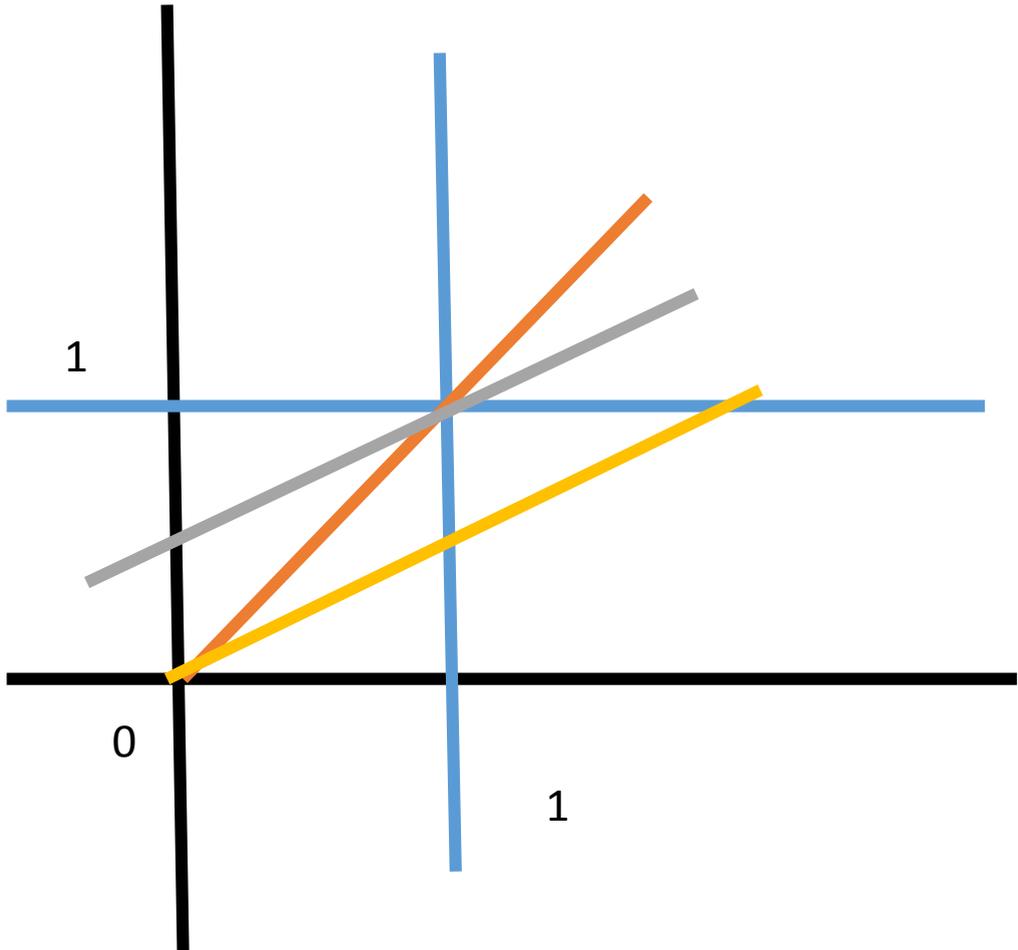


Figure1. Illustration of the PP Plot  
Source: made by Author

- QQ plot: The problem PP-Plot has is that presumes the CDFs start at 0 and end in 1. the extreme events take place in the tail of the distribution tend to straighten, even with a not proper fitting of the kurtosis. This plot overcomes this problem, because it compares quintiles. Also the optimal fit is a straight line , slope =1, interception point 0.

Other tests to check this are the Chi-square, Shapiro-Wilks, Kolmogorov-Smirnov or the Anderson-Darlings tests. The expressiveness is limited by the lack of available historical indices. We have to take into consideration that yearly only one degree day index value for season-contracts is catered, the number of values being limited. The shorter the data collecting periods, the smaller is the number of figures, nonetheless it exists.

The index value simulation method is more adjustable then the Burn analysis for the valuating the weather derivatives price tag. When normal distributions are present in

determining values or maturities, the IVSM can give closed form solutions for pricing weather derivatives. There are also some disadvantages, such as the normal distribution does not fit the degree days( it is to technical- degree days are positive or zero, while distributions can be negative, thus effects result on long periods, manifestances where a log normal or trimmed normal distributions). Another disadvantage is the computational power required for the data set new parameters being estimated for the maturities, thus making it very difficult the use of a single protocol in pricing weather derivatives. Probably the biggest inconvenience would be the lack of practicality due to the use of the Girsanov theorem ( that requires us to assume not transformation of the distribution). Thus by means of the Q-measure adjusted by the historic factor, the log normal distribution changes its form thus not being log normal any more. All this difficulties are reinforced by the fact that the risk free rate of returns does not have an equivalent for weather index, and the model does not permit switching to a neutral-risk.

### **The daily simulation method**

The limitation of the IVSM model, led to the creating of the daily simulation method that does not use the Girsanov equation, thus being easily applicable to different maturities, never the less manifesting its own complications. The idea tried was to generalize the Lucas model, thus doing a better pricing and valuation of weather derivatives (Cao and Wei). But while the largest number of papers explain the stochastic process adapted to weather derivative, Cao, Wei and Schirm thought that the "philosopher stone" would be found through the study if the discount factor under the P-measure.

The operation structure is: though a model that incorporates temperatures statistical characteristics we fit the historical data. Next step is a Monte Carlo simulation ran to show weather patterns, thus showing the possible scenarios of weather outcome. From the generated scenarios we determine the weather indexes, so being a step closer to finding the maturity payoff. This payoff is discounted by means of the equilibrium model, allowing a endogenous valuation (Cao and Wei present a endogenous price finding scheme, and Schirm a consumption based Capital Asset Pricing Model (CCAPM)) . Fully detailing this process is the primary idea of a future paper.

### **Conclusion**

Pricing and valuation of weather derivatives as not a task to be considered easy or approached without research-caution. As shown there are a variety of models, each with its set of obstacles. This sector is not standardized so, we can not point out an unique and perfect approach. The Burn analysis is intuitive, but may give large errors. The IVSM is the scientists choice, however by not being able to work in a fully risk-neutral environment, in practice is unreliable. The Daily Simulation Method works well, incorporating weather characteristics, discounting via the Lucas model adjusted with the consumption based capital asset pricing model. Despite the challenges it raises , the use of weather derivatives will prove to create suitable payoffs to compensate financial loss due to weather.

In my opinion, the finding of a generally accepted pricing and valuation model will cause a rise in the interest for this "insurance-investment" financial instrument.

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# PROFITABILITY - CAPITAL STRUCTURE TRADE OFF: CASE OF PUBLICLY ROMANIAN COMPANIES

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**Abstract:** *There is an increasing number of empirical works that test what drives firm profitability, since it is an objective and at the same time a frame of how a company is performing. The main aim of this paper is to test capital structure, noncurrent assets ratio and tax rate as determinants for profitability, with capital structure as main focus. Using a sample of 62 publicly Romanian for period 2001-2011 and panel data model the results suggest that financial statement variables considered are significant in gauging profitability. It was concluded that there is evidence for pecking order theory and firms with large amounts of noncurrent assets are under performing.*

**Keywords:** *profitability, capital structure, investment, taxation, financial statements.*

**JEL code:** *G30, G31, G32*

## 1. Introduction

Profitability is an important topic since it is an objective and at the same time a frame of how a company is performing. Not least, this effect has several implications for stakeholders, especially for listed companies.

There could be identified two major streams of research regarding determinants of firm profitability. First, economic tradition highlights the importance of external market factors in generating performance. Second, organizational approach is based on behavioral and sociological paradigm and suggests that organizational outcome is influenced by managers. In an integrated examination, factors from both streams seem to be as significant determinants for profitability. Furthermore, the results indicated that factors from organizational paradigm explain about twice as much variance in firm profit rates in comparison with factors from economic paradigm (Hansen and Wernerfelt, 1989).

Hirschey and Wichern analyze the accounting and market-value measures as determinants of firm profitability. Both types of measures can be used with caution as determinants of profitability, particularly R&D intensity, TV advertising, leverage and industry growth appearing to be important (Hirschey and Wichern, 1984). Using a simultaneous equation model, Brush et. al examine the relative influence of industry, corporate and business unit on firm profitability. They found that corporations have a larger influence over profitability in comparison with industry influence (Brush et al., 1999).

The main aim of this paper is to test the capital structure through debt ratio as determinant for profitability for Romanian companies, an emerging country. In order to improve the model two control variables were added, noncurrent assets ratio and tax rate. In this respect, the paper focuses on return on sales ratio as profitability measure and three variables that could influence it. In terms of methodology, panel

data model is employed by using fixed effects and random effects models. The results suggest that financial statement variables considered are significant in gauging profitability.

The paper is organized as follow. After this brief introduction, second section comprises a literary overview of empirical research regarding determinants of firm profitability. Section three describes the data collection, proposed model and the hypotheses for variables used in model. Section four reports data characteristics and empirical results. Section five concludes.

## **2. Literature review**

There is an increasing number of empirical works that test what drives firm profitability, according to specific areas from literature. For instance, in industrial economics literature there are two approaches, Structure-Conduct-Performance paradigm (SCP) and Persistence of Profit (POP) respectively. Traditional SCP paradigm approach states that profitability is determined by structural characteristics of the market such as concentration, economies of scale, barriers to entry and exit (Slater and Olson, 2002), while POP approach focuses on the time-series behavior of profitability, suggesting that any temporary deviation of firm profitability from market average is quickly adjusted through entry and exit effects (Goddard et al., 2006).

Another area of the literature, strategic management respectively, highlights the importance of internal resources as determinants of variations in firm profitability, since the main source of heterogeneity in profitability is considered management practices (Barney, 2001). The accounting and finance literature suggests the random walk hypothesis, i.e. the importance of a random walk model for time-series changes. Common measures for profitability such as return on assets, equity or sales were examined and similar findings with POP approach from industrial economics were reported (Callen, 2001).

However, it is well known that financing decision trigger important effects for company value since optimal capital structure lead to maximum level of profitability (Pirtea et al., 2010). At the same time, profitability depends on firm risk level, which can be measured in several ways (Anis et al., 2011).

A related strand of the literature has been examined financial statements drivers that could have an impact on firm profitability. Using a sample of 1384 firms from Belgium, France, Italy and UK, Goddard et al found that profitability is negatively related with size and gearing ratio and positively related with market share and liquidity (Goddard et al., 2005). In a multiple regressions model for Hindalco Industries Limited it was found that current ratio, liquid ratio, receivables turnover ratio and working capital to total assets ratio influence profitability (Singh and Pandey, 2008). A study over USA companies included in Standard and Poors Index suggests that variables such as sales, current ratio, debt-to-equity ratio, net profit margin, human capital investment, historical performance and industry diversification have influence on generating profitability (Nagy, 2009).

Few empirical findings with inconclusive results were performed for Romanian companies. In a sample of 18 companies, the results suggest that profitability is either negative or positive related with intangible assets, depending on profitability measure or industry sector (Purcărea and Stancu, 2008). Matiș et al. conducted a study in order to highlight the significance of Jones, Dechow and Kasznik models for 101 publicly Romanian companies that record a discrepancy between reported cash

flow and reported net income. They conclude that Jones and Dechow model appears to be significant at 10% level. In this respect, total accruals is positively related with changes in revenues, negatively related with property plants and equipments or change in revenues minus change in net account receivable (Matiş et al., 2010). In a time-series model for a chemical company it was found that profitability is positively related with the efficiency of inventories, debt level, financial leverage or efficiency of capitals and negatively related with fixed assets ratio (Burja, 2011).

### 3. Data and methodology

Data were collected from statistical department of the Romanian Ministry of Finance. This database provides accounts data starting from 1999 for all Romanian companies. Given the aim of the paper, it was decided to restrict the sample to listed companies at Bucharest Stock Exchange from tier 1, 2 and 3 for which ten years data were available. The reliability of financial statements was the reason for using publicly companies. In order to offer shares more attractive, listed companies have an incentive to present fair profit. As a comparison, private companies hide profit in order to avoid tax and thus it is likely that their financial statements do not reflect true results. Due to the specific nature of their activities, banking and financial firms were excluded from the sample. Finally, the sample was trimmed by dropping the outliers that could influence empirical results. Thus a balanced panel set of 682 year observations was obtained, with observations of 62 companies over the 2001-2011 period.

In order to capture profitability, various financial ratios can be used as a proxy. Among these, could be mentioned return on assets, return on equity and return on invested capital, each of them having pros and cons arguments. Instead of these frequently measures, it was used a measure for evaluating company's operational efficiency, profitability (PROF), calculated by dividing net income to sales.

Profitability could be affected by several variables at firm level. According to the purpose of this research, debt ratio (DR) expressed as total debts divided by total assets is used as a proxy for capital structure. The existing findings suggest that higher debt ratio generate higher costs and will lead to lower profitability.

*Hypothesis 1: "Capital structure and profitability are negatively related"*

Except capital structure, additional two control variables were used in order to improve the model. Investments could generate either scale economies or diseconomies of scale and thus noncurrent assets ratio (NCAR) expressed as noncurrent assets divided by total assets was used as a proxy for size.

*Hypothesis 2: "Size and profitability are either positively or negatively related, according to main driver of the growth"*

When companies perform better higher profitability means higher amount of tax payments and tax rate (TR) expressed as taxes paid divided by taxable income was included as a proxy for taxation

*Hypothesis 3: "Tax rate and profitability are positively related"*

The empirical model is estimated using panel data model, which allows controlling for variables one cannot observe or measure and for unobservable variables that change over time but not across companies (Baltagi, 2008). According to variables aforementioned, the empirical model is as follow:

$$PROF_{i,t} = \alpha + \beta_1 * DR_{i,t} + \beta_2 * TR_{i,t} + \beta_3 * NCAR + u_{i,t} \quad (1)$$

with  $u_{i,t} = \mu_i + \lambda_t + v_{i,t}$  where  $\mu_i$  denotes the unobservable firm effect to allow for unobserved influences on the profitability for each firm,  $\lambda_t$  denotes the unobservable time effect that control for the impact of time on profitability and  $v_{i,t}$  is the idiosyncratic error component.

It worth be noticed that Equation 1 is a static panel model with two way error component, in which a full set of individual firm effects,  $\mu_i$ , and time effects,  $\lambda_t$ , control for all cross-sectional and time series variation in profitability. In this respect, Equation 1 can be viewed as a model of the drivers of the short-run variation in profitability that would still remain unexplained after each set of effects. The availability of ten time-series observations requires data to be pooled and estimated with common slope. This procedure is in contrast with standard practice in corporate finance literature, in terms of time-series properties, but has the advantage of providing more accuracy coefficients.

#### 4. Results

This section exhibit the results for profitability empirical model described in previous section. Summary statistics for the variables included in model are reported in table 1. Particularly, there are 2 sections, panel A for descriptive statistics and panel B for correlation matrix.

**Table 1:** Summary statistics

<b>Panel A – Descriptive statistics</b>				
	<b>PROF</b>	<b>DR</b>	<b>TR</b>	<b>NCAR</b>
Mean	0.019	0.402	0.178	0.567
Median	0.035	0.374	0.171	0.557
Minimum	-3.555	0.005	-3.161	0.097
Maximum	1.247	1.698	2.552	0.981
Std. dev.	0.243	0.258	0.285	0.197
<b>Panel B – Correlation matrix</b>				
	<b>PROF</b>	<b>DR</b>	<b>TR</b>	<b>NCAR</b>
PROF	1			
DR	-0.357	1		
TR	0.117	-0.135	1	
NCAR	-0.024	-0.279	0.003	1

Source: Author calculation

It worth to be noticed that for publicly Romanian companies profitability is very low, with an average of 0.019. At the same time, investment policy is focused on non-current assets, since the average is higher than 50%. The average debt ratio (0.402) is similar with other emerging countries (Czech Republic) and lowers than in developed countries. Tax rate and profitability present some volatility, while skewness is observed for debt ratio and tax rate.

Correlation matrix highlights low correlations between variables, suggesting no multicollinearity issue. Furthermore, profitability is negatively correlated with debt

ratio and noncurrent assets ratio and positively with tax rate which is consistent with the literature review.

In order to test the model proposed two estimation methods were employed, fixed effects (FEM) and random effects model (REM) respectively. Table 2 reports the results for both methods, i.e. in column 2 are reported results for FEM and in column 3 are reported results for REM.

**Table 2:** Results

VARIABLES	COEFFICIENTS	
	FEM	REM
DR	-0.213*** (0.026)	-0.228*** (0.022)
TR	0.026* (0.013)	0.026* (0.013)
NCAR	-0.216*** (0.037)	-0.143*** (0.029)
CONS	0.259*** (0.026)	0.226*** (0.024)
R-squared	0.183	0.177
F-statistic	10.453	
p-value	0.000	0.000
Wald-statistic		164.904
p-value	0.000	0.000
Hausman test	13.350	
p-value	0.421	
Root MSE	0.089	0.089
Firms	62	62
Observations	682	682

Notes:

Standard errors are shown in parentheses.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Source: Author calculation

The results for both methods suggest the significance of debt ratio, tax rate and noncurrent assets ratio as determinants for profitability and have the expected sign. Additionally, a Hausman test was performed to select the most appropriate model. The test statistic is 13.350 with 0.421 p-value, suggesting that random effects model is preferred.

According to REM results, the relationship between debt ratio and profitability is negative and statistically significant. Firms with a higher debt ratio may tend to be affected, since the proportion of profits dedicated to servicing debt increase. This result is consistent with pecking order hypothesis which state there is a hierarchy in financing sources, first internal sources, second low-risk debt and third equity. Regarding control variables included in the model, tax rate is significant at 5% level while noncurrent assets ratio is significant at 0.1% level. The negative correlation with noncurrent assets ratio suggests that growth lead to diseconomies of scale, while positive correlation with tax rate suggests that high tax payment lead to higher profitability.

Overall, empirical results for Romanian companies are consistent with the findings from other empirical research. The relationship between profitability and debt ratio is negative, according to Goddard et al. (2005). Like Memon et al. (2012) tax rate is positively associated with profitability and like Burja (2011) noncurrent assets is negatively related.

## 5. Conclusions

This paper examines the impact of capital structure on corporate profitability for publicly Romanian companies. Limited studies have been conducted in this area so this empirical work will fill the gap in this field in Romania. On the basis of the estimation results and discussion, it is concluded that there is evidence for pecking order theory since profitability is adversely affected by capital structure. In addition, it worth to be noticed that firms with large amounts of noncurrent assets are under performing and rather generate diseconomies of scale, while firms with high tax rate perform better.

The results could have several implications for stakeholders, particularly investors and managers, since it provide a support in analyzing financial statements and making profitable investment decisions. Nevertheless, there could be implications for public policy and require further financial education. Thus, in a debt driven economy, a society can have an important role in generating economic prosperity and growth only if it can assimilate financial statements variables and is aware about their implications on firm profitability.

It can't be ignored that there are some limitations of the study, which require further research. Among these, the study could be improved either by using other estimation methods or additional variables. However, the results for the current model are significant and confirm the negative relationship between capital structure and profitability.

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## PREDICTION OF CORPORATE BANKRUPTCY IN ROMANIA THROUGH THE USE OF LOGISTIC REGRESSION

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**Abstract** *The purpose of this paper is to test whether data from synthetic financial statements publically available in Romania can be employed within a logistic regression model to accurately predict the corporate bankruptcy probability over the economic crisis period.*

*The population initially subjected to our study included all the 26,980 companies from the Timis County that submitted financial statements for 2007 to the public authorities. As this population proved very heterogeneous, we focused on a more homogeneous group, composed of 4,327 companies. The target population was chosen by employing both economical and statistical criterions.*

*The data from the synthetic financial statements was used to build 12 ratios, 5 of which have proven to be significant within a logistic model for predicting corporate bankruptcy.*

*It was clear that other sources of information could help improve the accuracy of the predictions, but these sources are not easily accessible to most of the stakeholders. As the synthetic financial statements are publically available, evaluating their utility in the prediction of corporate bankruptcy was one of the main objectives of this research.*

*The proposed model offers an in-sample overall 70.3% accuracy in the prediction of the bankruptcy event over a 5 – year period, with an out of sample overall accuracy of 67.6%.*

*Under these circumstances, the model is considered to be of immediate practical utility, as it can represent a tool for performing a fast estimation of the bankruptcy probability of a company that fits the profile of the target population.*

*As theoretical contributions, the research proves that the companies that filed for bankruptcy during the crisis period showed signs of weaknesses before the beginning of the crisis. Financial ratios that show relevance in the prediction of corporate bankruptcy at local level have been identified and their correlation with the bankruptcy probability has been evaluated. The model is expected to maintain its accuracy with minimal or no additional calibration for companies from the entire Romanian economy that fit the profile of the target population.*

**Keywords:** *bankruptcy; financial statement analysis; economic crisis; logistic regression; accuracy rate.*

**JEL classification:** G33, C21, M41.

## 1. Introduction

At the present time, Romania has just over 1 million active companies. All statistics show that the occurrence of the economic crisis has increased the failure risks at corporate level. Reports of the National Trade Register Office show a growth in the number of corporate bankruptcies in the first 2 years following the acknowledgement of the economic crisis in Romania, with a moderate decrease in 2011 and 2012.

Reports of the National Bank of Romania reflect a continuous increase of the rate of non-performing loans in the corporate sector nationwide, placing Romania on the 4th position within the EU, and on the 5th position worldwide (in a list of only 70 countries published by the International Monetary Fund).

Accepting the idea that the economic crisis has increased the failure frequency, it was assumed that the companies for which the failure risks have materialised showed particular weaknesses. The current research was set to determine whether signs of such weakness were reflected in the synthetic financial statements of the future bankrupt firms before the beginning of the economic crisis.

The population initially subjected to our study contained all companies from the Timis County that submitted financial statements to the Public Finance Administration in 2007 (26.980 companies).

"Company failure" was defined as the declaration of bankruptcy according to the Romanian law of bankruptcy. In this research, the authors focused on the occurrence of bankruptcy during the crisis period (2008 – 2012).

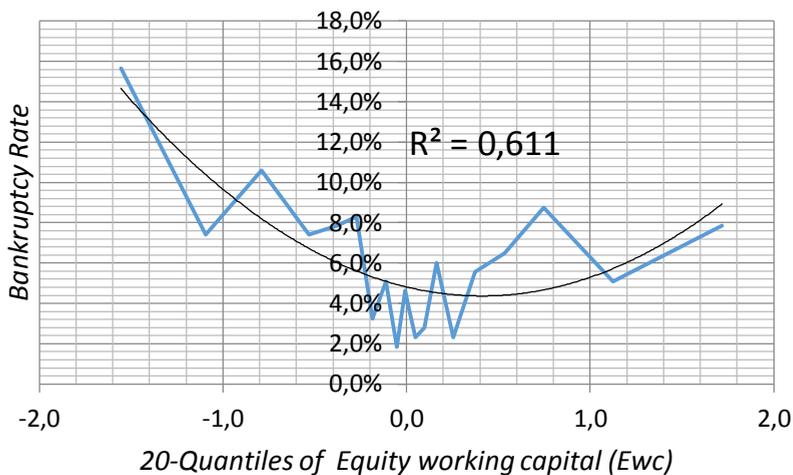
## 2. Methodology

The literature in the field of bankruptcy prediction offers a large variety of models after the elaboration methods:

- discriminant analysis (Altman E., 1968);
- hazard models (Schumway T., 2001);
- stationary financial distress models (Emel Kahya and Panayiotis Theodossiou, 1999);
- logistic regression (Mine Ugurlu and Hakan Aksoy, 2006).

Other models (Adnan A., Dar H., 2006) include artificially intelligent expert system models, univariate models, linear probability models, probit models, cumulative sums models, partial adjustment processes, recursively partitioned decision trees, case-based reasoning models, neural networks, genetic algorithms, rough sets models. The most popular statistical methods in the prediction of corporate bankruptcy (Hatem B. et al., 2005) are discriminant analysis and logistic regression.

In order to find a relation between available financial indicators in 2007 and the event of bankruptcy between 2008 and 2012, the method of logistic regression has been chosen (also known as logit). After scatter plot inspection of the relation between the 20-quantiles (vingitiles) of the independent variables and the bankruptcy rate, the variable *Ewc* (*Equity working capital*) was detected to present a u-shape relation. To count for this u-shape relation, both *Ewc* and its square should be entered in the model. All the other variables have been hypothesized to affect the bankruptcy probability linearly or, at least, monotonically. The relationship between *Ewc* and the Bankruptcy rate is described in Chart 1.



**Chart 1:** U-shape relation between Equity working capital (Ewc) and Bankruptcy Rate

### 3. Population

The population initially subjected to analysis included all companies in the Timis County (Romania) that submitted financial reports for 2007. Thus, data from 26,980 companies was evaluated, 1,933 of which would go bankrupt within the 2008 – 2012 period.

No new companies have been included over the crisis period, so specified numbers refer only to companies active at the end of 2007 which became insolvent in the following five years.

Of the non-bankrupt firms, 6,108 (24.4%) registered no sales in 2007 while 13,129 (52.4%) registered losses, thus consuming equity. Of the entire non-bankrupt population, 30.1% had no employees (7,549 companies) and 33.0% had public arrears (8,275 companies).

Of the bankrupt firms, 345 (17.8%) registered no sales in 2007 while 973 (50.3%) registered losses. Of the entire bankrupt population, 22.4% had no employees (433 companies) and 5.1% had public arrears (98 companies).

Preliminary evaluation of the data suggested important lack of homogeneity, which demanded for a more focused analysis.

After making adjustment for missing observations and unreasonable values, several filters have been applied in order to increase the level of homogeneity in the target population. Companies reporting values of *Atr*, *Fatr*, *Icr*, *Crcp*, *Far*, *Ewc* and *Roe* outside  $\pm 1.5^*$  interquartile range from Tukey's Hinges have been removed in order to reduce extreme and mild outliers which we consider to be standard procedure. However we think that the interval of  $\pm 3^*$  interquartile range also deserve much attention even if not analysed here. Companies with a negative *Ar* have also been removed. Regarding profitability, only companies with *Pr* between 0 and 50% have been retained. Even if this filtering procedure may be rightly criticised for keeping for estimation only a comfortable around mean population we think however that it

makes sense and useful insights may be obtained if further compared with other, more extreme, group of companies.

**Table 1:** Data selection process

Data sets	Description	Number of companies active at the end of 2007	Decrease - relative to the initial population	Number of companies insolvent in 2008 -2012
Initial Population	All companies from Timis county which submitted financial reports for 2007	26,860	-	1,907
Adjusted Population	Companies with missing observations and unreasonable values were removed	16,158	40%	1,315
Target Population	Fatr, Far, lcr, Crcp, Ewc and Roe within +/- 1.5* Interquartile Range; Ar>0; 0<Pr<50%	4,327	84%	266

#### 4. Explanatory Variables

The selection of the financial ratios that would be tested for their prediction of bankruptcy capacity was done considering the recommendations of the literature, as well as the limitations of the data available. In this matter, the attention of the authors was not focused on obtaining all data recommended by existing literature. The main purpose of the research was to test if the public financial data existent in Romania can be used efficiently in the estimation of the bankruptcy probability through a loggit model.

We thus used the financial data of the Timis County companies that was publicly available to build 11 ratios.

**Table 2** Ratios tested as explanatory variables

No	Ratios	Symbol	Formula
1	Fixed assets turnover ratio	<i>Fatr</i>	Sales / Fixed Assets
2	Inventory conversion ratio	<i>lcr</i>	(Inventory / Sales) x 360
3	Customer receivables collection period	<i>Crcp</i>	(Receivables / Sales) x 360
4	Fixed assets ratio	<i>Far</i>	Fixed Assets / Total Assets
5	Current assets ratio	<i>Car</i>	Current Assets / Total Assets
6	Autonomy ratio	<i>Ar</i>	Equity / Total Assets

N o	Ratios	Symbo l	Formula
7	Debt ratio	<i>Dr</i>	Debt / Total Assets
8	Solvency ratio	<i>Sr</i>	Total Assets / Debt
9	Equity working capital (100,000 RON)	<i>Ewc</i>	Equity - Fixed Assets
10	Profitability ratio	<i>Pr</i>	Net profit / Sales
11	Return on equity	<i>ROE</i>	Net profit / Equity

Our initial hypothesis was that a high total assets turnover ratio is associated with high return on assets (Liesz, 2002) and, as a consequence, with high profits, high autonomy ratio and low bankruptcy risks.

In addition, high total assets turnover ratios should have the potential of generating economies of scale, thus stimulating the profitability ratio, the second factor that determines the level of the return on assets in the Du Pont view.

First tests performed on the initial population suggested differently: the average total assets turnover ratio for bankrupt firms (0.99) was superior to the average total assets turnover ratio for the healthy firms (0.78).

The fixed assets turnover ratio is an indicator of the efficiency of the fixed assets management. Financing sources invested in fixed assets take a longer period of time until recovery, while their recovery is subjected to higher risks. We thus hypothesized that low fixed assets turnover ratios generate liquidity problems, and would therefore be positively correlated to the bankruptcy risk.

On the other hand, companies with financial difficulties would be expected to take different measures to regain proper liquidity, including the sale of fixed assets. From this perspective, low values of the fixed assets and high values of sales at low profitability ratios and long customer receivables collection periods could be positively correlated to the bankruptcy risk.

The inventory conversion ratio represents an estimation of the period that begins with the acquisition of raw materials or merchandise and ends with the sale of finished goods / merchandise. A high inventory conversion ratio forces the company to hold large values of inventory at each moment. This is expected to be correlated with a high working capital need, which could be financed from working capital or from short – term financial debt. We hypothesized that high inventory conversion ratios generate liquidity problems and involve higher debt ratios.

The customer receivables collection period is a ratio that attempts to estimate the average duration in which the receivables are being collected from customers. It is calculated based on the hypothesis of the uniformity of sales and collections throughout the duration of the year. A long collection period induces higher trade credit, thus affecting in a negative manner liquidity.

A study performed by Don B. Bradley III and Michael J. Rubach (Bradley III D., Rubach M., 2002) on 131 American companies filing for bankruptcy indicated that 66% of the studied population accused the difficulties in cashing the receivables as an important cause of their financial problems. The conclusion of the study is that failure to collect trade credit stands for an important factor of bankruptcy, alongside with general poor management of the working capital.

The literature (Bradley III D., 2004) mentions working capital problems as an important cause of bankruptcy, especially in the case of small and medium size companies.

The fixed assets ratio reflects the percentage of the fixed assets in the total value of the assets. Seen in the view of the financing process, this ratio shows the proportion in which the financing sources were invested in long-term resources. The long-term resources would be exploited for a long period of time and would release the financing sources gradually, over their economic lifespan.

We hypothesized that high fixed assets ratios would induce rigidity, making it for the company harder to adapt to changes that affect the volume of activity. In order for the financing sources invested in fixed assets to be fully recovered in the form of cash, the fixed assets need to be exploited at maximum capacity over their economic lifespan. A decrease in the level of activity (generated for example by a decrease of market demand) could keep a part of the financing sources invested in fixed assets from ever being recovered.

At the same time, fixed assets usually generate fixed costs, which increase the breakeven point and with it, the operating risks.

The current assets ratio reflects the percentage of the current assets in the total value of the assets. Ignoring the existence of prepaid expenses, the sum of the fixed assets ratio and the current assets ratio is equal to 1.

We believed that higher current assets ratios / lower fixed assets ratios would be associated with lower probabilities of bankruptcy, based upon the assumption of a higher flexibility of the investments made by the company.

The autonomy ratio shows the percentage of equity in total financing sources. The autonomy ratio and the debt ratio are perfectly correlated, as the autonomy ratio = 100% - the debt ratio. Under these circumstances, we decided to only use the autonomy ratio for further testing. Based on the principle of the financial leverage, a company should raise its debt ratio if it would have the capacity to generate a sustainable positive difference between its return on assets and the cost of debt. For an indebted company, the return on assets should allow the coverage of the cost of debt, while the liquidity of the assets in which the debt was invested should allow for sufficient cash flows to make the principal payments. We expected a lower autonomy ratio / higher debt ratio to be associated with higher bankruptcy frequency.

The solvency ratio shows the capacity of the total assets to cover the total debt. It is correlated to the autonomy ratio and the debt ratio and thus is expected to be lower for bankrupt companies.

The profitability ratio shows the capacity of the sales to generate profits. Low profitability ratios could be a cause for cash-flow problems, as the profit represents an important factor in the generation of cash. On short-term, we also take into account the possibility of cash-flow problems leading to low profitability ratios, as the company could reduce the profitability ratio in an attempt to boost sales. On a market that is significantly price-sensitive, low prices could be one of the main factors for increasing sales. Low prices would sustain low profitability ratios, but high sales could convert in scale economies (with positive impact on the profitability ratio).

## 5. Results

As the fixed assets ratio and the current assets ratio are strongly correlated, only the fixed assets ratio was put to further use in the research. In the same manner, from the autonomy ratio, the debt ratio and the solvency, only the autonomy ratio was retained.

The selection procedure of the significant discriminant variables is basically a one step approach. Firstly the logit regression is estimated including all the candidate variables *Fatr*, *Crcp*, *Far*, *Ar* and *Ewc* proved to be significant at the 0.05 significance level. On the other hand *Icr*, *Pr* and *Roe* fail the significance test at the 0.05 level and thus are excluded.

The estimated model has the following form:

$$P(\text{Bankruptcy} = 1) = \frac{1}{1 + e^{-z}}$$

Where:

$$Z = a + b_1\text{Fatr} + b_2\text{Crcp} + b_3\text{Far} + b_4\text{Ar} + b_5\text{Ewc}$$

The estimated coefficients, Wald test and  $e^b$  values for the estimation sample are presented in the following table.

Table 3 Variables in the Equation

	<i>b</i>	Standar Error	Wald Test	df	Sig. (p-value)	$e^b$	95% Confidence interval for $e^b$	
							Lower	Upper
<i>Fatr</i>	-0.031	0.013	5.563	1	0.018	0.969	0.944	0.995
<i>Crcp</i>	0.004	0.001	9.036	1	0.003	1.004	1.001	1.006
<i>Far</i>	-3.155	0.623	25.619	1	0.000	0.043	0.013	0.145
<i>Ar</i>	-2.198	0.474	21.495	1	0.000	0.111	0.044	0.281
<i>Ewc</i>	-0.302	0.153	3.885	1	0.049	0.739	0.548	0.998
<i>Const.</i>	-0.853	0.379	5.059	1	0.025	0.426		

Because *b* coefficients are difficult to interpret,  $e^b$  is computed. This value shows how many times the odds of bankruptcy are multiplied if the independent variable varies by one unit. The overall goodness-of-fit was tested by using the Hosmer-Lemeshow test. The test is chi-square distributed and is obtained by calculating the Pearson chi-square statistic on the observed and expected frequencies for ten groups of the predicted probability. The value of the test is 6.921 (p-value= 0.545) so the null hypotheses of equality between observed and predicted frequencies cannot be rejected. Another useful test is the difference between the values of -2Log Likelihood for the estimated model and a baseline model including only the constant. The value of the test, also chi-square distributed, obtained in our case is 109.99 (p-value =0.000) with five d.f.

The model may be further improved if the square of *Ewc* is added. As shown is Chart 1 *Ewc* has a U-shape relation with the probability. It follows that a quadratic transformation,  $Q(Ewc)$ , containing both *Ewc* and  $Ewc^2$ , will generate a new variable which will relate the probability in a monotonic fashion. Indeed by adding  $Ewc^2$

the pseudo R-square coefficient (Nagelkerke R-square) rise from 0.13 to 0.15. Another important change is that the *Ewc* loses significance, ( $p=0.89$ ), in favour of *Ewc*<sup>2</sup> which is significant at all levels, ( $p=0.000$ ).

An optimal cut-off point for the probability of 0.071 has been used. This value was estimated by optimizing the difference between sensitivity and the false positive rate (1-specificity).

The customer receivables collection period shows a positive correlation to the bankruptcy probability in the proposed model, which suggests that higher bankruptcy probabilities are associated to the companies with high customer receivables collection periods.

The fixed assets ratio, the fixed assets turnover ratio, the equity working capital and the autonomy ratio showed negative correlations to the estimated probability of bankruptcy, which suggests that high values of these ratios are associated with low bankruptcy probabilities.

In order to validate the model on a spatial out-of-sample basis, the companies from the target population have been randomly split in two approximately equal groups: estimation group (2165 companies) and validation group (2162 companies).

The model generated through logistic regression offers an in-sample overall 70.3% accuracy in the prediction of the bankruptcy event, with an out of sample overall accuracy of 67.6%. The accuracy rate on validation sample rises slightly to 67.9% if *Ewc*<sup>2</sup> is added.

**Table 4** Classification Table

Observed		Predicted					
		Estimation sample			Validation sample		
		Company State		%	Company State		%
		Healthy	Bankrupt		Healthy	Bankrupt	
Company State	Healthy	1432	592	70.8	1377	660	67.6
	Bankrupt	52	89	63.1	40	85	68.0
Accuracy Rate		70.3			67.6		

As reflected in Table 5, some of the explanatory variables are correlated, but their independent effects on the bankruptcy probability justified their inclusion in the model.

**Table 5** Correlations

Pooled Within-Groups Matrices									
		Fatr	Icr	Crpc	Far	Ar	Ewc	Pr	Roe
Correlation	Fatr	1.000	0.078	-0.067	-0.680	0.002	0.326	-0.129	0.118
	Icr	0.078	1.000	-0.058	-0.239	-0.266	-0.050	-0.278	-0.156
	Crpc	-0.067	-0.058	1.000	-0.200	-0.083	0.043	0.082	-0.051
	Far	-0.680	-0.239	-0.200	1.000	-0.001	-0.458	0.028	-0.101
	Ar	0.002	-0.266	-0.083	-0.001	1.000	0.462	0.522	-0.173
	Ewc	0.326	-0.050	0.043	-0.458	0.462	1.000	0.230	-0.013
	Pr	-0.129	-0.278	0.082	0.028	0.522	0.230	1.000	0.402
	Roe	0.118	-0.156	-0.051	-0.101	-0.173	-0.013	0.402	1.000

## 6. Conclusions

The fixed assets ratio, the fixed assets turnover ratio, the equity working capital and the autonomy ratio showed negative correlations to the estimated probability of bankruptcy, while the customer receivables collection period was positively correlated to the estimated probability of bankruptcy.

The negative correlation between the fixed assets ratio and the bankruptcy risk is contrary to our initial expectations. A high fixed assets ratio involves the investment of a high percentage of the company's financing sources in long – term assets, leaving a low percentage of financing sources to be invested in current assets. While current assets are either in the form of cash, or they convert to cash in a short period of time, the conversion of fixed assets into cash takes years and it can only fully happen in the current assets are being constantly used at full capacity.

Data analysis showed that for the group of companies with fixed assets ratios lower than 40%, the bankruptcy frequency was higher than the average, while over the 40% fixed assets ratio limit the bankruptcy frequency became lower than the average. A possible explanation could be that companies with high current assets ratios have higher working capital needs which are associated in the literature with high bankruptcy risks. We were not able to verify the correlation between the current assets ratio and the working capital need due to lack of data.

The fixed assets turnover ratios proved to be negatively correlated to the probability of bankruptcy. The hypothesis that low fixed assets turnover ratios generate liquidity problems and are therefore associated with high bankruptcy risks is sustained by the results of the analysis.

The customer receivables collection period is positively correlated to the bankruptcy probability, as initially suspected. The bankruptcy incidence is significantly lower than average for companies with customer receivables collection periods lower than approx. 30 days and higher for all the rest of the companies. In fact, the bankruptcy incidence is continuously increasing as the customer receivables collection period is becoming higher. This finding is consistent with the suggestions of the literature. From the financing point of view, high customer receivables collection periods lead to large values of the receivables, which makes necessary the investment of additional financing sources in the operating cycle. From the liquidity point of view, high customer receivables collection periods lead to the extension of the operating cycle, with negative impact on the cash-flows.

The customer receivables collection period is calculated based on the assumption of uniformity of sales and collections throughout the year. Still, in many cases, the customer receivables collection period is distorted by the existence of trade credits that are long overdue. Overdue trade credits artificially increase the customer receivables collection period, at the same creating cash – flow problems.

The economic crisis was responsible for important delays in the payment of trade credit, which led to increments in the customer receivables collection periods for many companies. Our findings show that companies with higher customer receivables collection periods from before the economic crisis were more vulnerable to the bankruptcy risk.

The autonomy ratio is negatively correlated to the bankruptcy risk. Companies with autonomy ratios lower than approx. 30% (which involve debt ratios higher than approx. 70%) show higher than average bankruptcy risks.

The correlation between the autonomy ratio and the bankruptcy risk proved to be as initially expected. The bankruptcy state is characterised through the company's

incapacity of paying its debt. Higher leveraged companies are subjected to higher bankruptcy risks. At the same time, through the leverage effect, companies with high debt ratios and low autonomy ratios should have higher potential in terms of returns on equity. The return on the assets financed from debt should cover the cost of debt and allow a supplementary remuneration of the equity holders.

Primary analysis of the correlation between the autonomy ratio and the return on equity confirms a tendency of the return on equity increasing with the decrease of the autonomy ratio (and the increase of the debt ratio).

The last explanatory variable (the equity working capital) is negatively correlated to the bankruptcy risk. The bankruptcy risk decreases as the equity working capital increases. Still, very high values of the equity working capital are associated with higher than average bankruptcy risks. For this reason, we expect a U-shape function to be a better estimate of the relationship between the equity working capital and the bankruptcy probability than a linear one. Such a function will be tested in future research.

The equity working capital represents the equity that exceeds the fixed assets and thus remains available (after the coverage of fixed assets) for financing current assets. High values of the equity working capital are associated with high autonomy ratios and low fixed assets ratios.

The bankruptcy prediction model proposed through the use of logistic regression is considered to be of practical utility, as it is capable to accurately predict the bankruptcy event over a 5-year period. The model only employs financial data from the synthetic financial statements publically available in Romania.

Further research should test the model for companies from the other departments of Romania. We expect the model to maintain its accuracy with minimal or no additional calibration.

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## CATASTROPHIC EVENTS MODELING

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**Abstract:** *This paper presents the emergence and evolution of catastrophe models (cat models). Starting with the present context of extreme weather events and features of catastrophic risk (cat risk) we'll make a chronological illustration from a theoretical point of view of the main steps taken for building such models. In this way the importance of interdisciplinary can be observed. The first cat model considered contains three modules. For each of these indentified modules: hazard, vulnerability and financial losses a detailed overview and also an exemplification of a potential case of an earthquake that measures more than 7 on Richter scale occurring nowadays in Bucharest will be provided. The key areas exposed to earthquake in Romania will be identified. Then, based on past catastrophe data and taking into account present conditions of housing stock, insurance coverage and the population of Bucharest the impact will be quantified by determining potential losses. In order to accomplish this work we consider a scenario with data representing average values for: dwelling's surface, location, finishing works. On each step we'll make a reference to the earthquake on March 4 1977 to see what would happen today if a similar event occurred. The value of Bucharest housing stock will be determined taking firstly the market value, then the replacement value and ultimately the real value to quantify potential damages. Through this approach we can find the insurance coverage of potential losses and also the uncovered gap. A solution that may be taken into account by public authorities, for example by Bucharest City Hall will be offered: in case such an event occurs the impossibility of paying compensations to insured people, rebuilding infrastructure and public buildings and helping the suffering persons should be avoided. An actively public-private partnership should be created between government authorities, the Natural Disaster Insurance Pool, private insurance companies, reinsurers, stock exchanges, institutions specialized in cat events modeling in order to develop and use alongside compulsory and facultative insurance of buildings new alternative risk transfer solutions as catastrophe bonds(also known as cat bonds).*

**Keywords:** *cat risk; cat model; earthquake; financial losses.*

**JEL classification:** *G22.*

### 1. Introduction

Catastrophes are extreme events, characterized by a low frequency but a high severity, currently being observed an upward tendency of both parameters. For example, during 1970-1980 the catastrophes frequency ranged around 150 catastrophes per year, while in the years 2000-2011 the recorded values were nearly 300 events each year, the maximum frequency being reached in 2005 when 397 catastrophic events were registered. In this context, special attention of all

stakeholders is required in order to find the most appropriate methods for managing catastrophic risk (cat risk).

In the past, buying an insurance policy seemed to be a complete solution for managing risk, but nowadays we can't say the same thing. Along with the economic development, the limits of traditional insurance could be observed, since new risks appeared and couldn't be covered by this. Among these are the weather conditions risk, terrorism and certain economic risks. Furthermore, over the last years the consequences of catastrophes were devastating in some areas.

There isn't just one class of stakeholders interested in an appropriate catastrophic risk management, but rather all the parties involved which can undergo losses as a result of the occurrence of such an event: property owners, insurers, reinsurers, mortgage banks as well as capital markets due to the call of traditional insurance market to them and the development of alternative risk transfer solutions offered by the market ART- *Alternative Risk Transfer*. Government's role in managing cat risk shouldn't be ignored, especially through some programs whose purpose is to control the consequences of such events by reducing the probability of occurrence of these risks or by establishing of some funds to be used for assistance immediately after a catastrophe has occurred.

Any risk involves a degree of uncertainty, but in the same extent the presence of some influential factors leading to situations entailing damages, so we can't suppose that these events have random consequences, but rather we should concentrate to have a better understanding of deterministic part of them.

## 2. Cat Risk and Catastrophes Modeling

At the base of risk assessment is situated the exposure, characterized by several elements: the resource at risk, also known as the object of risk; the random event or peril to which the object is exposed; the consequence, representing the possible impact on resource when the peril occurs.

In the next table we are going to illustrate these three concepts for some catastrophes:

**Table 1** Exemplification of the defining elements of cat risk

Exposure	Peril	Consequence
The number of houses	Earthquake	Financial losses Human casualties
The number of houses in the area affected by floods	Flood	
The number of houses in the region affected by storm	Storm	
The coast length	Tsunami	
The number of passengers	Terrorist attack	

Source: Authors' processing (Condamin et al., 2006:32)

Usually the resource at risk is quantified by values regarding the number of units, the acreage, and the volume. As regards the peril, knowing the probability of occurrence is an important thing. When it comes to the consequences, these can

be: financial or other, but in most of cases the goal is finding a model which results are shown as monetary losses.

Taking into consideration the complexity of catastrophic events the appearance of cat models can't be attributed to one area, but rather is considered that the first models emerged as a result of cumulative effort of insurance experts and those specialized in the science of natural hazard.

The beginning of catastrophe modeling is considered around 1800. Again are different opinions regarding the first steps in models constructing between experts from different fields. Therefore, on one hand, insurers consider that cat modeling lies in the earliest day of property insurance, at that time being used a rudimentary technique that consisted in the use of marks in order to see the concentration of their exposure. On the other hand, seismologists and meteorologists argue for the affiliation of cat modeling to modern science, when the nature and the impact of these extreme events are better understood.

In time there has been observed an evolution of these models, in the 1970's being published some studies theorizing the source and the frequency of events, so that, in the next step, along with the development of information technology systems, models provide estimations of losses in case of catastrophe. The first specialized companies that developed software which estimate the possible losses are: AIR Worldwide, Risk Management Solutions, EQECAT which later changed its name to ABS Consulting.

A positive impulse for the cat models development and also for a better understanding of the need for such models was given in the aftermath of two catastrophes that led to major losses: Hurricane Hugo and Loma Prieta Earthquake, both occurring in 1989. In the next period more and more insurers have turned to specialized companies in catastrophe modeling in order to improve their methods for pricing insurance policies. In addition, a signal to the public sector was given, U.S. Government being the first interested in using such models. So, in 1997 was launched the program Hazards U.S., also known as HAZUS. At first it offered only the possibility of determining potential losses in case of an earthquake, but lately also for losses due to wind or floods.

One of the problems in cat modeling is the lack of historical data. Since catastrophes are rare events large series of data can't be built and this explain the necessity of calls for the use of simulations through which similar results are obtained as in the case of real events occurrence.

### **3. Cat models components**

Models are tools used in order to have a simplified representation of the reality. A feature of catastrophe models is that these are built through the contribution of several disciplines, such as: physics, meteorology, statistics, insurance, engineering and others. Informatics contribution shouldn't be neglected because it offers us the use of simulation and thereby relevant results, even with smaller data series.

For all models there is a certain degree of uncertainty which can't be completely removed. So, it is necessary to distinguish between two different types of uncertainty: random and epistemic. Regarding random uncertainty we should mention that there is no way to reduce it by getting more information, but is associated with the impossibility to predict catastrophes. On the other hand, epistemic uncertainty emerges because of insufficient data or information for a specific catastrophe and in

this situation a better understanding on the phenomenon or additional information may lead to decrease of the uncertainty, which is the purpose when building a catastrophic model.

All cat models have some common components, or modules as these are called, regardless the type, or region where catastrophe occurs. In the following a detailed presentation of each of them will be offered. In addition it will be recorded the defining elements for each of them. (Born and Martin, 2006; Chávez-Lopez and Zolfaghari, 2010; Zimmerli, 2003; Grossi and Kunreuther, 2005)

### **3.1. Hazard Module**

Randomness characterizing natural catastrophes can't be eliminated with the help of certain models, as it is impossible to exactly predict their occurrence moment. If for certain natural catastrophes, for example floods, sometimes there are some warnings a few days before in the great majority of cases even this is impossible.

The ultimate goal of hazard module is identifying the locations most likely to be affected, the frequency of occurrence as well the severity, intensity of catastrophes.

In order to do this the specialists performing model follow next steps:

- Getting data from past catastrophes;
- Determining the probability distribution based on historical data;
- Generating, by computer, a large number of events similar with past ones, resulting a large scale of cat events that might actually produce;
- Calculating the intensity for each location considered.

Necessary information on past events include: localization of seismic zones and faults, geological properties of the region to observe the seismic waves propagation, in the case of earthquakes; coast length, barometric pressure, wind speed when it comes to hurricanes.

In order to achieve simulations, one of the most popular and used method is Monte Carlo. This is an iterative technique which consists in generating a number of scenarios based on a set of initial data when seeking more data and real observation is not possible, this being also the case of catastrophes. For achieving a similarity between real and simulated events it is necessary that the latter to follow the probability distribution of initially recorded data.

A very important element is the occurrence frequency of catastrophes, this aspect being characterized by a high level of uncertainty and at the same time by a major influence on the final outcome of model, the determination of possible losses. For determining the occurrence probability of an event should be taken into consideration certain representative parameters of that event. For example, in the case of earthquakes should be considered the pressure on faults.

The final step of this module, once all other requirements have been met consists in intensity quantification for each event resulting from simulations. Thus, for earthquakes, magnitude is the measure of intensity. If we consider a Richter scale we get a measure of intensity depending on the energy released by earthquakes, but in the case of Modified Mercalli scale the intensity is expressed by the potential losses. Another advantage is the fact that if an earthquake is characterized by a single level of magnitude, in case of potential losses, the distance from the epicenter is considered and as we move from the epicenter, the reduced losses will be observed.

### 3.2 Vulnerability module

This component of cat models is also known as engineering because the construction of damage functions, which is one of the main objectives of this module, lies with the engineers.

To notice the vulnerability, an analysis of the extent of one specific event is required. For this purpose, once the intensity is determined, for each simulated event resulting from the first module we move forward to apply these values on a portfolio of buildings. A database containing information about buildings and their contents is required, and through mathematical relationships the damages level is computed. The main features of buildings included in databases are: type of construction, building materials used quality of work taking into consideration also the labor force, building destination, occupancy, height, maintenance, age.

Numerical illustration of vulnerability module is realized through damage ratio. This should not be confused with compensation ratio determined as a ratio between the amount of compensation and the insurance premiums collected.

For different insured objects MDR (mean damage ratio) is determined:

$$\text{Mean damage ratio} = \frac{\text{Total losses}}{\text{Total value of insured objects}} * 100$$

One last step after determination of damage functions, through which we can have an image about expected damage ratio for different levels of intensity, is generation of vulnerability curves. These are built depending on the type of risk and also on classes of insured objects.

### 3.3 Financial losses module

Within this component the last step for finalizing the cat model is realized. It is to establish a relationship between the initial data, characteristic to each catastrophe, and the level of financial losses. At this stage a special attention is given to experts opinions about damage rate for different types of building. This is necessary because it is difficult to update too often damage functions to include all changes when new techniques of construction appear or other codes regulate constructing new buildings.

Then, having estimated the level of losses we can determine the value of insured losses, these being the share of entire damage after a catastrophe covered by the insurer. In this case, policy conditions have a major importance, being considered: existing deductibles, coverage limits, co-insurance, etc.

## 4. Illustration of the 3 modules of cat models for an earthquake in Bucharest *Hazard module*

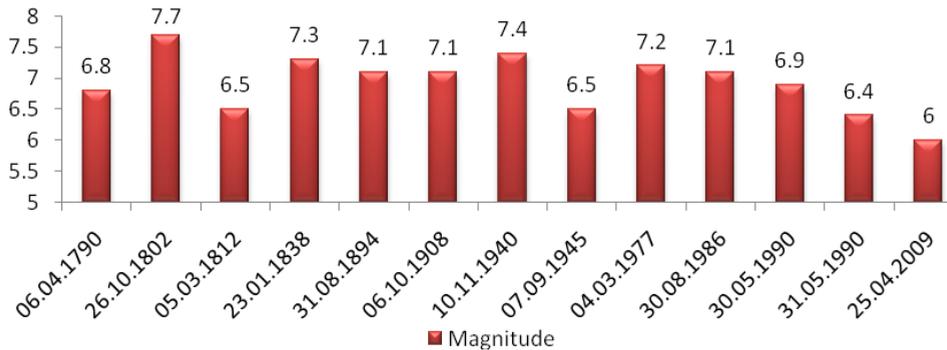
In Romania, the counties are classified into three zones, A, B and C based on earthquake risk exposure. Those from C zone are the most vulnerable, Bucharest being part of this class. According to the Natural Disaster Insurance Pool the three zones include:

- Zone A: Alba, Arad, Bihor, Cluj, Hunedoara, Maramureș, Sălaj;
- Zone B: Argeș, Bistrița, Botoșani, Călărași, Caraș Severin, Constanța, Dolj, Giurgiu, Gorj, Harghita, Iași, Mehedinți, Mureș, Neamț, Olt, Satu Mare, Sibiu, Suceava, Tulcea, Timiș, Vâlcea;

- Zone C: București, Bacău, Brăila, Brașov, Buzău, Covasna, Dâmbovița, Galați, Ialomița, Prahova, Vaslui, Vrancea, Ilfov

Vrancea is the most important seismogenic zone in Romania. Also, National Institute for Earth Physics defines all epicentral zones: Făgăraș-Câmpulung, Banat, Crișana, Maramureș and Dobrogea. Once identified, these are the locations most likely to be affected in case an earthquake occurs.

Regarding past earthquakes that occurred in Romania in Figure 1 can be observed the most important ones, with a magnitude greater than 6 on Richter scale.



**Figure 1:** History of Romania earthquakes with magnitude over 6 on Richter scale  
Source: Authors' processing based on data provided by [www.snas.ro](http://www.snas.ro)

Although the highest magnitude was recorded in case of 1940 earthquake, however in the classification of top 10 disasters in Romania in the period 1900-2012 conducted by Centre for Research and Epidemiology of Disasters (CRED) and made available through the database EM-DAT, the strongest effects were felt in the case of 1977 earthquake. The consequences were:

- 1641 deaths: rank 1 of 10
- 2000 million USD ,economic damage costs: rank 1 of 10
- 396300 affected people, rank 2 of 10

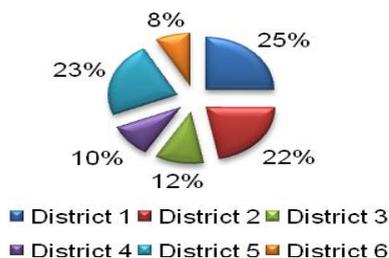
The frequency of Vrancea earthquakes with magnitude over 6 on Richter scale is estimated so: (Wenzel et al.: 2002)

- If  $M_w \geq 6.5$ , 10 years
- If  $M_w \geq 7.0$ , 25 years
- If  $M_w \geq 7.4$ , 50 years

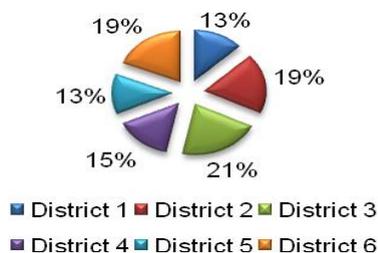
If we consider that an earthquake over 7 occurs every 25 years, the annual probability of occurrence is estimated to 4%.

#### *Vulnerability module*

Within this module we propose to notice the extent of an earthquake whose intensity is greater than 7. This requires an assessment of Bucharest housing stock. In 2011 in Bucharest were recorded 113863 buildings mainly concentrated in 3 of the 6 districts, as follows: District 1, District 4 and District 2 together comprising 70% of total buildings in Bucharest.



**Figure 2:** The structure of Bucharest buildings portfolio

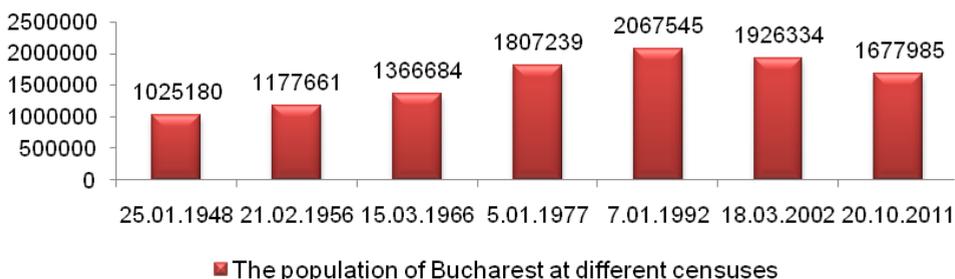


**Figure 3:** Distribution by district of Bucharest conventional dwellings in 2011

Source: Authors' processing based on data provided by [www.insse.ro](http://www.insse.ro)

For a detailed image we considered relevant to assess the number of conventional dwellings, a total of 803794 in 2011. These are evenly distributed in the 6 districts of the capital. Even if the lowest number of buildings can be noticed in District 3 here we can find the greatest number of dwellings, 170205. 98.4% of the total number of conventional dwellings from Bucharest is private property, 1.4% state property and 0.2% private group property.

Also, to observe an earthquake's impact, in addition to housing stock, we should take into account the population exposed to such an event:



**Figure 4:** The population of Bucharest at various censuses

Source: Authors' processing based on data provided by [www.insse.com](http://www.insse.com)

Considering the fact that in comparison with 1977 the population decrease was around 7% we expect in case that an earthquake with the same intensity occurs to face similar consequences in terms of number of people affected. Using Holt Winters forecasting method the next value for the Bucharest population is 1.429.636 people. It is also useful to notice the share of casualties in the total population recorded in Bucharest after the 1977 earthquake. There were registered 1424 deaths and 7598 casualties. By reporting to the total population we obtain the value 0.5%. If a similar event occurs at present this share will be greater, respectively 0.54%. This increase is explained by the decrease of the population, tendency that seems to continue in the future.

We first have to do some clarification on structure of Bucharest housing stock. Thus, 60% of the buildings have been built before 1977, the remaining 40% after 1977. (Lungu, 2002:12)

We use average values for the area where the dwelling is situated, finishing work and surface. The average surface of living rooms in Bucharest is 21.1 square metre (sqm)/room and considering the structure of dwellings depending on the number of rooms we obtain a average surface of a dwelling of 50 sqm.

**Table 2:** The structure of housing stock depending on the number of rooms

	Share in total
1 room	15.5%
2 rooms	40.7%
3 rooms	32.9%
4 rooms	9.2%
5 rooms and more	1.7%

Source: Authors' processing based on data provided by [www.insse.ro](http://www.insse.ro)

To determine an average market value we consider the two moments of the construction year: before and after 1977, so we get:

**Table 3:** Determination of market value taking into account the year of construction

Year of construction	Market value	Market value of a 50 sqm dwelling
Before 1977	1250 Euro/sqm	62.500 Euro
After 1977	1600 Euro/sqm	80.000 Euro

Source: Authors' processing

Average market value of Bucharest housing stock =  $60\% * 803.794 * 62.500 + 40\% * 803.794 * 80.000 = 55.8$  billion Euro.

The average replacement value is 875 Euro/sqm in case of an average level of finishing works, so for the same 50 sqm dwelling results a replacement value of 43.750 Euro.

Once determined this value we can notice that in case of a compulsory insurance policy the amount received as compensation is insufficient to bring the dwelling to the situations before the event. The next step is to determine real value. This value results by applying the remaining value coefficient to the replacement value.

**Table 4:** Determination of real value taking into account the year of construction

Year of construction	Remaining value coefficient	Replacement value	Real value of a 50 sqm dwelling
Before 1977	55%	43.750 Euro	24.063 Euro
After 1977	76%		33.250 Euro

Source: Authors' processing

Real value of Bucharest Housing stock =  $60\% * 803.794 * 24.063 + 40\% * 803.794 * 33.250 = 22.3$  billion Euro

Level of potential damages in Bucharest in case of a Vrancea earthquake with a 8 intensity:

**Table 5:** Damages distribution depending on the degree of destruction

Damages	Share in the total number of dwellings	Destruction degree
D0-no damage	11%	0%
D1-slight damage	22.7%	0%-30%
D2-moderate damage	28.5%	30%-60%
D3-heavy damage	23.6%	60%-80%
D4-very heavy damage	12.1%	80%-100%
D5-destruction	2.1%	100%

Source: Authors' processing (Trendafiloski et al.,2008:13)

Average potential damages=22.3 billion Euro \* (11% \* 0% + 22.7% \* 15% + 28.5% \* 45% + 23.6% \* 70% + 12.1% \* 90% + 2.1% \* 100%)= 10.2 billion Euro

To determine the level of potential insured losses we have to know the insurance coverage in Bucharest:

**Table 6:** Insurance coverage of dwellings in Bucharest

	Bucharest
Number of optional insurance policies	377.976
Number of compulsory insurance policies	129.411
Total insurance policies	517.687
Number of dwellings	792.391
Insurance coverage of dwellings	64%
By optional insurance	47.7%
By compulsory insurance	16.3%

Source: Authors' processing based on [www.csa-isc.ro/MediaCentre/](http://www.csa-isc.ro/MediaCentre/)Press Release

Total amount insured through compulsory policies= 2.588.220.000 Euro

Total amount insured through optional policies = 60% \* 377.976 \* 24.063 + 40% \* 377.976 \* 33.250= 10.484.222.693 Euro

Total amount insured= 13 billion. Euro

Mean Damage Ratio=10.2 billion Euro/13 billion Euro\*100=78.46%

*Financial losses module*

Based on data considered above we can determine the Average Annual Loss:

$AAAL = \sum p_i \cdot L_i$ , where  $p_i$  is the annual probability of occurrence and  $L_i$ , the loss generated by the event  $i$ .

$AAAL = 4\% \cdot 10.2 \text{ billion Euro} = 408 \text{ million Euro}$

## 5. Conclusions

Cat models development should become a priority for insurers especially nowadays when cat risks are considered a real problem. Due to high compensations payable in a short period of time, an objective risk assessment is essential for the insurance company for its financial situation in order not to be affected.

In this study we used three different measurements: market value, replacement value and real value. Insurers recommend using the real value, or sometimes the

replacement value when an insurance policy is bought but never the market value because it is questionable. Therefore, although insurers would receive higher premiums because of higher amount insured this fact wouldn't imply also compensations over the damage value. In addition, potential insured persons often are not willing to pay high amounts of money in order to ensure their dwellings. Given the fact an insurance established at market value would avert potential clients more, a compulsory insurance of dwellings is considered to be in fact a "compromise". In our vision the main coordinates of public-private partnership are the compulsory insurance of buildings with an insured amount chosen by the policyholder and taking as reference the real value of buildings but also subsidizing insurance premiums for those people who can't afford it. In addition alternative risk transfer solutions should be considered for natural catastrophe: earthquakes or floods.

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# ECONOMIC AND FINANCIAL INSTABILITY PERIODS INDUCED THROUGH THE BANKING SYSTEM

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**Abstract:** This paper is an empirical study which analyzes the influence of banking system to the economic and financial environment. At the basis of this research there are two subjective definitions of economic instability periods (CII) and of financial instability periods (FII) and two composite indexes called EWI (Economic Warning Index) and FWI (Financial Warning Index) defined in a prior research. The countries included in the study are Czech Republic, Hungary and Romania. There is both a quantitative and qualitative approach. Using econometrics techniques as OLS regressions, Fixed effects and Fixed dummy effects there were identified significant banking indicators in explaining economic and financial instability periods. Then, I compose a banking index which captures the costs occurred to the banking system and I assess its performance in explaining the economic and financial instability indexes through in the sample and out of the sample techniques. This research aim to observe the influence of the banking sector evolution to the incidence of economic and financial instability periods and give us a warning regardless any negative trends in the macroeconomic or financial activity, affecting the national or the global situation. Using model simulations on historical data, the model performance was assessed upon in the sample and out of sample estimation techniques. The evaluation results suggest that banking indicators give us a warning signal of the negative trend of economic and financial environment.

**Keywords:** *economic instability, financial instability, leading indicators, banking system.*

**JEL classification:** *G01*

## 1. Introduction

The recent economic and financial crises have had a significant impact on the world economy. It revealed the need of continuous improvement in identifying, measuring and predicting vulnerabilities of the economy as a whole. A key lesson drawn from the past experience was that we have to take into consideration the interconnections between economic, financial and banking system.

Current crises offered a great lesson that the surveillance for crises prevention must be more rigorous and with a better incorporation of financial sector. After its onset it was highlighted the requirement to take care about cross-border spillovers, macro-financial linkages within and across countries and broader systemic risks for the global economy.<sup>3</sup>

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<sup>3</sup> Kato,T.(2010), "Early Warning Systems and Their Role in Surveillance", Deputy Managing Director, International Monetary Fund

Because it is not possible to predict the exact point in time at which the crisis sets in, the purpose of this paper is to identify possible vulnerabilities induced through banking system and to treat them in order to mitigate the costs of the economy. I defined a set of eighteen potential leading indicators from banking/financial sector, in the period 2000 - 2012. It was composed a balance panel with seven hundred and eighty observations. At the basis of my decision to choose a continuous model was the fact that it motivates policy makers in steering policy continuously. Using econometrics techniques there were identified significant banking indicators in explaining economic and financial instability periods. Then, it was composed a banking index which captures the costs occurred to the banking system. Its performance in explaining the economic and financial instability indexes it was assessed through in the sample and out of the sample techniques. The research result reveals the importance of the banking system indicators in explaining economic and financial instability periods. A better incorporation of those indicators in supervisory tools of decision factors would help in mitigating economy costs occurred in such difficulty periods.

This paper is organized as follows. Second section presents us literature review of economic, financial and banking indexes created to identify the vulnerabilities and to treat them in order to avoid large scale damages. Those researches aim to obtain a complete picture of the evolution of concerns to improve measuring, predicting and managing the vulnerabilities to the economic system. It is also highlighted the current precarious context. Third section presents the construction of the panel data, through selection of the countries, selection of potential leading indicators and of the research period. There are also presented the transformations of the variables, in order to obtain comparable results. Fourth section presents us the composition of the model, followed by econometrics techniques of estimation as OLS, Fixed effects and Fixed dummy effects applied for the panel and econometrics techniques used to assess its performance in term of in-the-sample and out-of-sample fit. Fifth section shows the results, presenting the estimations and their interpretations. Last section concludes about the utility of this model in actual environment and summarizes the main ideas. Econometric code in R language and detailed description consisting in five appendixes is available at request.

## **2. Literature review**

The interest of researchers in early warning was visible even in the 1979 years with Paul Krugman's and Bilson models for explaining currency crises. Paul Krugman in his paper "A Model of Balance of Payments" presents the situations when balance of payments problems transforms into balance of payments crises<sup>4</sup>. Paul Krugman believes that only an analysis of international size could give a warning regarding the amplitude of the current crises. He identifies three generations of currency crises, from which the third one tries to answer at two questions: should the economies with large currency debt avoid currency depreciation and what is the role of capital mobility. In first edition of his book "The Return of Depression Economics", Paul Krugman associated crises with bacteria that once were severe epidemics, but

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<sup>4</sup> Krugman, P. (1979), "A Model of Balance-of-Payments Crises", *Journal of Money, Credit and Banking* 11(3), pp. 311–325

considered defeated by the modern medicine. Surprisingly those bacteria revived in a stronger form, resistant to all antibiotics. His conclusion is that the entire economy is “a surprisingly dangerous place”.<sup>5</sup>

Those things happen in a context in which Ben Bernanke (2004) and Robert Lucas (2003), among other economists, declared few years ago that even the economy will occasionally suffer any recoil, the era of great depressions is already gone. The economic cycle was considered an outdated notion. The economist states that we have to learn from all economic and financial crises, because anyway those are very hard to predict. Graciela Kaminsky, Saul Lizondo and Carmen Reinhart in their paper “Leading Indicators of Currency Crises” compose an early warning system in predictive purpose for currency crises. The authors use as leading indicators a broad variety of variables: external sector, financial sector, real sector, public finances, institutional and structural variables, political variables and “contagion effects”, whose behavior is studied. They compose an index of exchange market pressure with the significant indicators. When this index is above its mean by more than three standard deviations it is considered as crises.<sup>6</sup>

Lucia Alessi and Carsten Detken (using signaling approach developed by Kaminsky, Lizondo and Reinhart used to predict foreign exchange and banking crises) composed early warning indicators for costly asset price boom/ bust cycles. They highlight 3 gaps identified on “leaning against the wind”. They identify high-cost boom which is a boom followed by three years of real GDP growth lower with at least 3 percentage points than the potential growth and low-cost boom. In 1989 it was a HCB, in 2000 only 60% of the first wave has been found, and they also identified a new wave in 2007. The conclusions of the paper highlights that financial variables are preferred to real variables in predicting costly asset price booms.

Rose and Spiegel analyzes the occurrence and effects of a crisis using a Multiple Indicator Multiple Cause (introduced by Goldberger 1972), focusing on national variables, but ignoring cross country “contagion” effects. They analyze a continuous variable, taking care only on the cross-country incidence, and ignoring the time-series effects, fact which failed the results because they take care on national variables. The analysis of Stephen G. Cecchetti, Marion Kohler and Christian Upper based on 40 systemic banking crises reveal that current financial crises is composed from a broad range of economic factors and they identify systemic banking crises tendency to create negative output effects.<sup>7</sup>

The paper’s dataset “This Time is Different: A Panoramic View of Eight Centuries of Financial Crises” includes African, Asian, European, Latin American countries, North America and Oceania, in 1800-2006 period and use variables as debts, prices, exchange rates, government finances, trade, GDP and capital flows and construct a composite index of financial instability that is multidimensional. The conclusion is that “financial crises are more a way of life affecting all” and that serial default is a widespread phenomenon across emerging markets and several advanced economies. If prior to World War II, serial banking crises in advanced economies were most common, as other emerging markets developed their financial sector,

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<sup>5</sup> Krugman, P. (2000), “The Return of Depression Economics”

<sup>6</sup> Kaminsky, G., S. Lizondo and C. Reinhart (1998), “Leading Indicators of Currency Crises” <http://ideas.repec.org/p/prs/pra/mprapa/6981.html>

<sup>7</sup> Cecchetti, S.G., M. Kohler and C. Upper (2009), “Financial Crises and Economic activity”, NBER Working Paper Series

they became part to the “serial banking crises”. Also, they identified a pattern in the incidence of IMF programs. Another important fact is that private debts increase prior to a banking crisis and that banking crises precede or coincide with sovereign debt crises. Debt continues to rise after default as arrears accumulate and GDP contracts. The authors identified that short term debts become public after the crises occurs. Their analysis confirms that financial crises emanate from the financial centers with transmission through interest rate shocks, commodity prices collapses, capital flows and shocks to investor confidence. An extremely valuable conclusion is that tranquil period of 2003-2007 proves once that each lull is followed by a new wave of defaults.<sup>8</sup>

Another paper of Carmen M. Reinhart and Kenneth S. Rogoff is focused on banking crises and highlights that crises are more severe for the financial centers like UK, USA and France. They analyze for the first time in the literature the role of “housing prices” and find similarities of behavior of frequency and duration of banking crises between developed and middle-income countries.<sup>9</sup>

### 3. Data set

I construct a balanced panel of three countries over 2000 – 2012 at annually frequency, obtained from World Bank and containing a number of seven hundred and eighty observations. I choose to perform the analysis for Czech, Hungary and Romania because according to Eurostat Database and World Bank analysis those countries registered comparable level of variables as GDP per person, unemployment rate, public debt, budget balance and other economic or financial indicators. Because the number of observations is the same for all countries, the panel is balanced. I chose to use annually percentage changes (%) data in order to avoid the limitation of available indicators with predictability power of the model. Using monthly or quarterly data the explanatory power of the model could be reduce by omitting important potential leading indicators which are not available in monthly frequency.

At the basis of this research there are two subjective definitions of economic instability periods (CII) and of financial instability periods (FII) and two composite indexes called EWI (Economic Warning Index) and FWI (Financial Warning Index) defined in a prior research. Economic Warning Index (EWI) represents a weighted cost of economic instability periods. Financial Warning Index (FWI) represents a weighted cost of financial instability periods. On the other side there was identified a set of potential leading indicators belonging to banking sector. Those eighteen indicators were selected based on their significance and on their relevance related to crises symptoms. My selection of indicators was influenced by availability of data and frequency of observations. During the research a problem in estimating the crisis monitoring indicators was the lack of timely and appropriate data, which avoid a complex analysis based on more variables and more years.

The entire list of potential leading indicators was obtained from World Bank database in the idea of having consistency of the methodology used for calculation of this

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<sup>8</sup> Reinhart, C.M. and K.S. Rogoff(2008), “This Time is Different: A Panoramic view of eight Centuries of Financial Crises”, NBER Working Paper

<sup>9</sup> Reinhart, C.M. and K.S. Rogoff (2008), “Banking crises: An equal opportunity menace”, Working paper 14587

indicator. According to World Bank, the definitions of indicators which compound the panel are as follows<sup>10</sup>.

Bank capital to assets represents the ratio of bank capital and reserves to total assets.

Bank nonperforming loans to total gross loans represent the value of nonperforming loans divided by the total value of the loan portfolio. The loan amount recorded as nonperforming should be the gross value of the loan as recorded on the balance sheet, not just the amount that is overdue.

Claims on central government include loans to central government institutions net of deposits.

Claims on other sectors of the domestic economy include gross credit from the financial system to households, nonprofit institutions serving households, nonfinancial corporations, state and local governments, and social security funds.

Deposit interest rate is the rate paid by commercial or similar banks for demand, time, or savings deposits. The terms and conditions attached to these rates differ by country, however, limiting their comparability.

Domestic credit provided by the banking sector includes all credit to various sectors on a gross basis, with the exception of credit to the central government, which is net. The banking sector includes monetary authorities and deposit money banks, as well as other banking institutions where data are available (including institutions that do not accept transferable deposits but do incur such liabilities as time and savings deposits).

Foreign direct investments are the net inflows of investment to acquire a lasting management interest in an enterprise operating in an economy other than that of the investor.

Interest rate spread is the interest rate charged by banks on loans to private sector customers minus the interest rate paid by commercial or similar banks for demand, time, or savings deposits

Lending rate is the bank rate that usually meets the short- and medium-term financing needs of the private sector and it is normally differentiated according to creditworthiness of borrowers and objectives of financing.

Listed domestic companies are the domestically incorporated companies listed on the country's stock exchanges at the end of the year, without including investment companies, mutual funds, or other collective investment vehicles.

Market capitalization (also known as market value) is the share price times the number of shares outstanding.

Money and quasi money comprise the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government. This definition is frequently called M2. The change in the money supply is measured as the difference in end-of-year totals relative to the level of M2 in the preceding year.

Portfolio equity includes net inflows from equity securities other than those recorded as direct investment and including shares, stocks, depository receipts, and direct purchases of shares in local stock markets by foreign investors.

Real interest rate is the lending interest rate adjusted for inflation as measured by the GDP deflator.

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<sup>10</sup> World Bank, 2013, <http://data.worldbank.org/indicator>

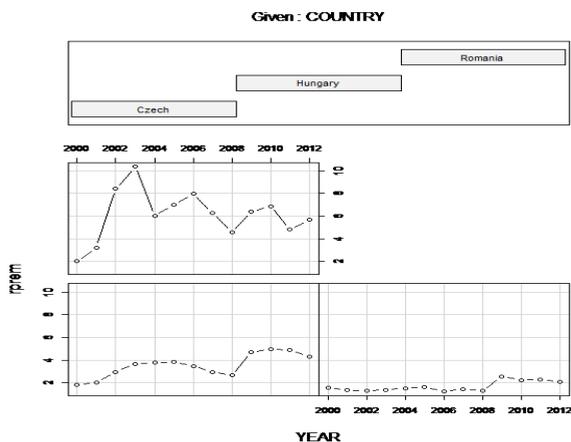
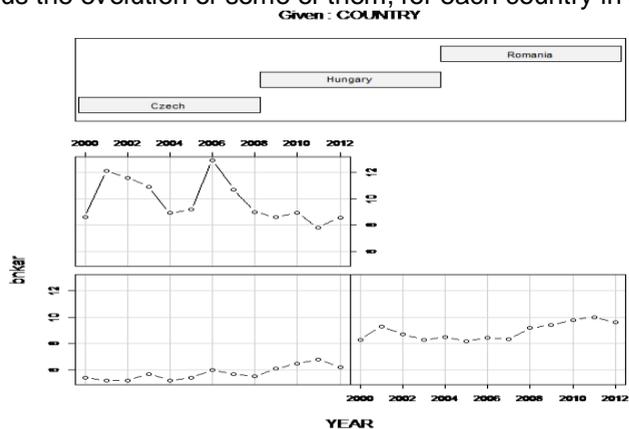
Risk premium on lending is the interest rate charged by banks on loans to private sector customers minus the "risk free" treasury bill interest rate at which short-term government securities are issued or traded in the market.

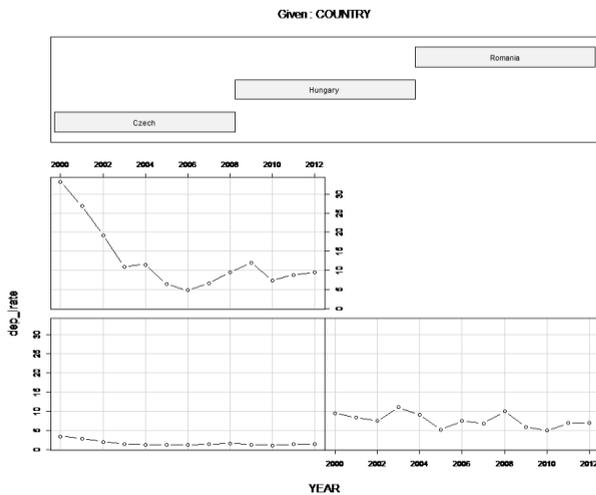
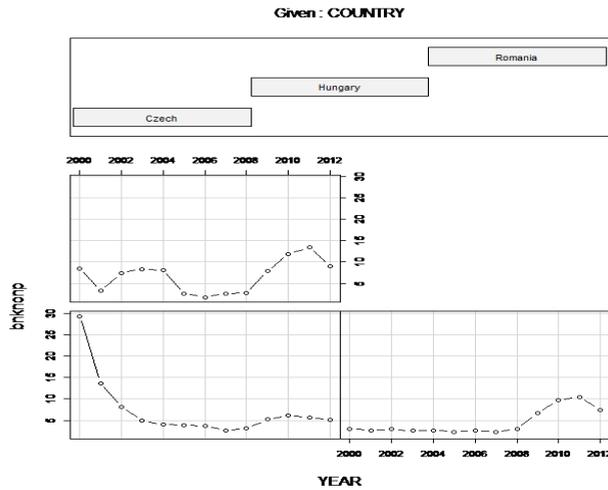
S&P Global Equity Indices measure the U.S. dollar price change in the stock markets covered by the S&P/IFCI and S&P/Frontier BMI country indices.

Stocks traded refer to the total value of shares traded during the period. This indicator complements the market capitalization ratio by showing whether market size is matched by trading.

Turnover ratio is the total value of shares traded during the period divided by the average market capitalization for the period.

The above indicators were collected for Czech, Hungary and Romania because despite the difference which appears for each country and for time to time, those countries registered a similar level of data. In the period 2000 – 2012, according to the data those variables registered evolutions (either positive or negative) from 15% to 37,705%, indicating instability periods. Using annually percentage changes assure us that the variable are standardised and there are no outliers in the dataset. To justify the choice of potential leading indicators, the following four graphs present us the evolution of some of them, for each country in the analyzed period.





## 4. Model

### 4.1 Composition

At the basis of this research there are two subjective definitions of economic instability periods (CII) and of financial instability periods (FII) and two composite indexes called EWI (Economic Warning Index) and FWI (Financial Warning Index) defined as follows in a prior research <sup>11</sup>.

CII was composed by applying weighted schemes to monthly industrial production growth, unemployment rate growth and external trade growth. In this equation a growth of unemployment rate represents a cost for the economy, so it enters with positive sign in composition of CII. Because first difference of external trade is negative, it also represents a cost for the economy. Industrial production growth

<sup>11</sup> Rodica – Oana Ionita, 2013 - “Early Warning Indicators of economic and financial instability indexes” published at FIBA – International Finance and Banking Conference

enters in the equation with negative sign, because it adds value for the economic activity.

FII is composed by applying weighted schemes to an interbank benchmark index specific to each country and to a capital market index. For the interbank reference index I used PRIBOR for Czech Republic, BUBOR for Hungary and ROBOR for Romania. For capital market I used BUX for Czech Republic, PSE for Hungary and BET for Romania.

$$CII = \frac{(unr - ext - indp)}{FII = ABS\left(\frac{PRIBOR / BUBOR / ROBOR + BUX / PSE / BET}{2}\right)}$$

$$EWI = 0.006 * ecsi + 0.0111 * mmir + 0.0148 * cpri + 0.0049 * rtt + 0.0186 * hicp + 0.0319 * stockmc + 0.0124 * ir3m + 0.3697 * exchr\_gr + confin * 0.0032 + ind\_k * 0.5 + ln\_fres * 0.0275$$

$$FWI = 0.02 * ecsi + 0.0234 * mmir + 0.019 * cpri + 0.0139 * rtt + 0.043 * hicp + 0.5 * stockmc + 0.0607 * ir3m + 0.0147 * exchr\_gr + confin * 0.1614 + ind\_k * 0.1344 + ln\_fres * 0.0096$$

For those indicators it was tested in prior research the heterogeneity across countries and years and it was revealed that the countries and year of the research are comparable, registering small differences.

On the other side, there are eighteen potential leading indicators belonging to banking system. Those eighteen indicators were selected based on their significance and on their relevance related to crises symptoms.

## 4.2 Methodology

This article purpose is to investigate which of the banking indicators are significant in explaining periods of economic instability quantified through CII, periods of financial instability quantified through FII, economic warning index (EWI) and financial warning index (FWI).

One of the methods used for estimating the unknown parameters in the two linear regression models was OLS. Because OLS regression does not consider heterogeneity across countries and time I continue the analysis with fixed effects and fixed dummy effects. In the following analysis I considered also the heterogeneity across countries and across years. I estimated fixed dummy effects because the simplest approach to model heterogeneity is to assume that each country has its own specific intercept (dummy). Each component of the factor variable is absorbing the effects particular to each country. I also performed a Fixed effects estimation. In panel data analysis, the term fixed effects estimator (also known as the within estimator) is used to refer to an estimator for the coefficients in the regression model. If we assume fixed effects, we impose time independent effects for each entity that are possibly correlated with the regressors.

In Table 1 are available the results of the three different of estimations for the four indexes.

**Table 1:** Estimation results

Index/ Adjusted R <sup>2</sup>	OLS	Fixed effects	Fixed dummy effects
CII	48.53%	38.03%	97.41%
FII	57.35%	37.53%	91.00%
EWI	89.80%	42.87%	99.97%
FWI	70.51%	42.91%	98.69%

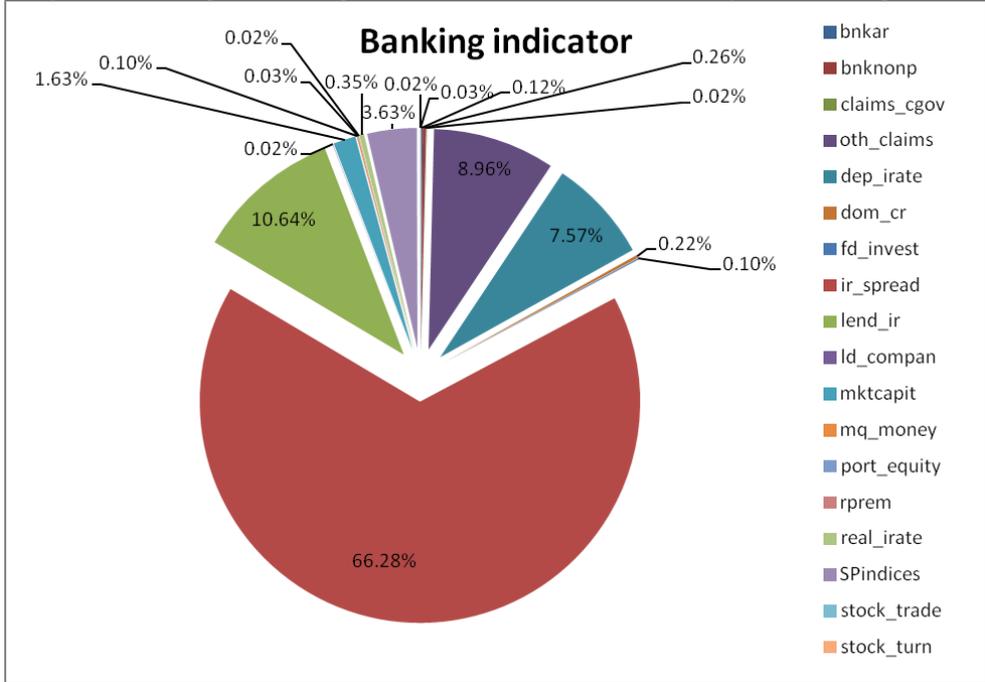
Comparing the results it is visible that fixed effects estimation has the lower explanatory power of the indexes, it explain the economic and financial warning index only in proportion of 42.87%, respective 42.91%. OLS estimation increase the explanatory power of the model explaining the economic instability period in proportion of 48.53%, financial instability period in proportion of 57.35%, economic warning index in proportion of 89.80% and financial warning index in proportion of 70.51%.

By including a dummy in the model, fixed dummy effects estimation fits better the model. According to the estimation, banking indicators explain over 90% of the economic and financial instability periods and indexes.

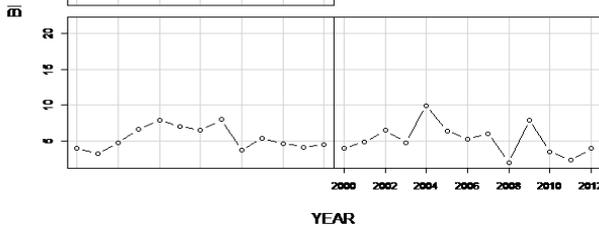
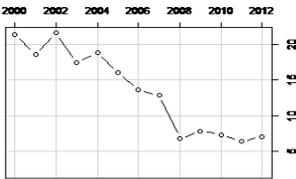
In order to identify vulnerabilities of the economic and financial environment, I composed a banking index that is multidimensional with significant variables estimated using Fixed Dummy Effects. This index represents the cost of the banking system. Higher values of the index indicate higher costs suffered by the banking system and also a cost for the whole economic environment. The significant variables were weighted according to their p-value significance. As smaller was the p-value, as important was that variable in explaining the Early Warning Index, illustrated in Graph 5. In Graph 6 it is presented the evolution of the Banking Index (BI). According to the Graph 6 its is visible that the index behave better for Romania, than for the other countries included in the study. I made this affirmation because the index captures Romania's ascending cost of banking starting with 2008 and up to the middle of 2009 and the new cost occurred starting with 2011 and up to the present.

Graph 5: Banking index weights

Graph 6: Banking Index

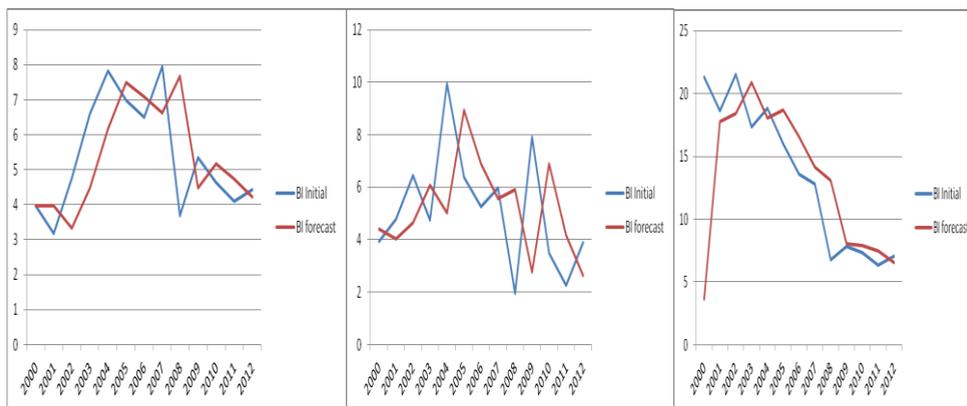


Given : COUNTRY



### 4.3 Performance

As follows I used econometric techniques to assess in the sample and out of sample performance of the model. Based on in the sample estimation, Graph 7 – 9 captures the comparison between the observed and the forecast values registered by the Banking Index. It is visible the comparability of the two series (from left to right: Czech, Hungary, Romania) with small differences which may appear from calculation of collected data.



### 5. Results

At the basis of this research there are two subjective definitions of economic instability periods (CII) and of financial instability periods (FII) and two composite indexes called EWI (Economic Warning Index) and FWI (Financial Warning Index) defined in a prior research. Because it is not possible to predict the exact point in time at which the crisis sets in, the purpose of this paper is to identify possible vulnerabilities induced through banking system and to treat them in order to mitigate the costs of the economy. I defined a set of eighteen potential leading indicators from banking/financial sector, in the period 2000 - 2012. The countries included in the study are Czech Republic, Hungary and Romania.

Using econometrics techniques as OLS regressions, Fixed effects and Fixed dummy effects there were identified significant banking indicators in explaining economic and financial instability periods. Comparing the results of the estimations, fixed effects estimation has the lower explanatory power of the indexes, it explain the economic and financial warning index only in proportion of 42.87%, respective 42.91%. OLS estimation increase the explanatory power of the model explaining the economic instability period in proportion of 48.53%, financial instability period in proportion of 57.35%, economic warning index in proportion of 89.80% and financial warning index in proportion of 70.51%. Fixed dummy effects estimation fits better the model, explaining over 90% of the economic and financial instability periods and indexes

According to the analysis, there are some significant variables which are very important in explaining the occurrence of an economic and financial instability periods, giving important signals to policy makers in order to limit potential damages

which can appear. In the future, a special attention should be granted to permanently monitoring potential leading indicators, reacting to the signals received and include those indicators in the policy measures undertaken, in order to cover all the areas of the economy and to protect against potential risks.

I, then composed a banking index which captures the costs occurred to the banking system and I assess its performance in explaining the economic and financial instability indexes through in the sample and out of the sample techniques. Using model simulations on historical data, the model performance was assessed upon in the sample and out of sample estimation techniques, suggesting that the observed and forecasted values follow the same trend, with small differences. The evaluation results suggest that banking indicators give us a warning signal of the negative trend of economic and financial environment.

## **6. Conclusions**

In this research I composed a banking index which captures the costs suffered by the banking system, based on a panel including Czech, Hungary and Romania over the period 2000 – 2012 at annually frequency. I use eighteen potential leading indicators representing country specific variables. Using econometric techniques I identified which of those indicators are significant in explaining the instability periods of economic and financial environment. Then I assess the model performance in terms of in the sample and out of sample forecast. At the basis of my decision to choose a continuous model was the fact that it motivates policy makers in steering policy continuously and the fact that there is no need to decide between yes/ no value of crisis.

Summarizing, banking indicators have a higher explanatory power in explaining the evolution of economic and financial instability periods, explaining more than 90% from the indexes which capture the cost incurred at the economic and financial environment. After observing the influence of the banking sector to the incidence of economic and financial instability periods, I composed a banking index which captures the cost suffered by the banking system. As higher is the level of this indicator, as higher there are the costs registered.

Concluding, I state that this index fits well Romania's behavior then for the other countries included in the study, fact which is perfectly right because the countries have terms and conditions attached which differ by country, however, limiting their comparability.

A limitation of the model consist in data availability an also in the fact that it is hard to find a model which fits to all the countries included in the panel, because even if those countries are comparable, they have different regulations which affect their behavior in the current context.

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# THE INFLUENCE OF CORPORATE SPECIFIC FACTORS UPON FINANCING DECISIONS

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**Abstract:** *The purpose of this paper is to analyze the existing theories for the capital structure of a corporation and to determine the factors that influence the financing decisions of Romanian corporations. The gearing ratios vary a lot among Romanian corporations pointing out the fact that the internal specific factors are the ones with a greater impact upon their capital structure, and not the external factors. Our empiric research evaluates the determining factors for the debt ratio (total debt/total assets) of some Romanian corporations, focusing on its explanatory variables by including them within simple and multiple econometric models. The panel data indicators computed for the companies in the Cluj area listed on the Bucharest Stock Exchange were evaluated with the OLS and FEM techniques. The results have been interpreted, pointing out that company size and asset turnover seem to have a positive influence upon the debt ratio of selected companies, while profitability and liquidity seem to influence the debt ratio of selected companies negatively.*

**Keywords:** capital structure, debt ratio, theories of capital structure, determinants of capital structure, empirical data.

**JEL classification:** G32.

## 1. Introduction

The capital structure of a company represents the way that company finances its assets through some combination of equity and debt, of own and borrowed funds. Basically, capital structure policies involve a trade-off between risk and return. Besley and Brigham (2011) argue that „using more debt raises the riskiness of the firm’s earnings stream, but a higher proportion of debt generally leads to a higher expected rate of return. A higher risk associated with greater debt tends to lower the stock’s price. Therefore, the optimal capital structure of a company is utmostly considered to be the one that strikes a balance between risk and return to achieve the ultimate goal of maximizing the price of the stock.”

Generally, capital structure decisions are considered to be influenced by six primary factors:

- the *firm’s business risk* - the greater the firm’s business risk, the lower the account of debt that is optimal.
- the *firm’s tax position*. A major reason for using debt is that interest is tax deductible, which lowers the effective cost of debt.
- the *financial flexibility*, i.e. the ability to raise capital on reasonable terms under adverse conditions.
- the *managerial attitude* (conservatism or aggressiveness) with regard to borrowing. Some managers are more aggressive than others, hence some firms

- are more inclined to use debt in an effort to boost profits.
- the *growth rate*. Firms that are in the growth stage of their cycle typically finance that growth through debt, borrowing money to grow faster. The conflict that arises with this method is that the revenues of growth firms are typically unstable and unproven. As such, a high debt load is usually not appropriate. More stable and mature firms typically need less debt to finance growth, as its revenues are stable and proven.
- the *market conditions* can also have a significant impact on a company's capital-structure condition.

These six points widely discussed by the specialised literature on the field largely determine the target capital structure of a company, but operating conditions can cause the actual capital structure to vary from the target at any given time.

## 2. Literature Review

The optimal capital structure of an entity has raised major debates in the last tens of years, and as a result there exist numerous capital structure theories, ranging from the works of Modigliani and Miller (1958) to the trade-off theory of Kraus and Litzenberger (1973) and pecking order theory of Myers and Majluf (1984) and furthermore towards the agency theory and the market timing theory.

Among a great variety of foreign specialists, some Romanian authors have also investigated these theories in detail, such as Mihalca G and Antal R (2009) that have analysed the trade-off and pecking order hypotheses on the Romanian market empirically, on a sample of non-financial Romanian firms, listed on the Bucharest Stock Exchange (BSE) from 2005 to 2007. Using a panel data analysis, they found that the pecking order theory could be successfully applied to the Romanian market, as the Romanian profitable firms with a high proportion of tangible assets have a lower debt ratio.

Several determinants of the capital structure of a corporation among manufacturing companies listed on BSE have been analysed by Vătavu S.(2012), her findings establishing size as the main financial indicator with significant impact on the capital structure of companies operating in the manufacturing industry.

The specialized literature classifies the determinants of the capital structure of a corporation into two large categories: *external factors*, reflecting the macroeconomic conditions specific to every country (such as economic growth, inflation, interest rate etc) and *internal factors*, specific to each and every corporation, such as the size of the company, its assets' tangibility, its profitability and liquidity, the assets' turnover, its investment opportunities and others.

## 3. Methodology and Data

Our paper investigates the influence of corporate specific factors upon the financing decision of thirteen companies performing in the Cluj-Napoca area and listed on the BSE, acting within different fields of activity. The capital structure of these economic entities has been studied as a function of different internal factors.

The dependent variable is the debt ratio of these companies, i.e. the leverage, traditionally computed as the ratio between total debt and total assets. We have used their book values, directly from the companies' annual financial statements. Furthermore, the first independent variable is the profitability of the company, computed as total operating income divided by total assets. According to the diverse existing theories, we may expect either a positive or a negative correlation. Secondly,

the size of the company was considered as an independent variable, measured as a natural logarithm of the company's total assets. We expect a positive correlation. Then, we have considered asset tangibility as another independent variable, computed as the ration between tangible fixed assets and total assets, and further expecting either a positive or a negative correlation. The fourth explanatory variable is the liquidity of the company, determined as the ratio of cash and current accounts to total assets and the fifth explanatory variable of this study is the assets' turnover, computed as total sales divided by total assets.

Our study focuses on the econometrical modelling of the debt ratio of Romanian companies through simple and multiple regressions, using panel data. The study uses a data basis constructed with the help of BSE data for companies listed during the 2009-2011 time period, comprising 39 observations for each independent variable and for the dependent variable as well. The authors have restricted the research area upon the listed companies of Cluj county. These panel data were processed using the Gnu Regression, Econometrics and Time-series Library (Gretl) software, using both the Ordinary Least Squares (OLS) and Fixed Effects Model (FEM) techniques.

Firstly, we obtained several simple linear econometric models, of the form:

$$y_t = a + bx_t + \varepsilon_t,$$

where:

$y_t$  = the debt ratio of companies <sup>not</sup> DebtRatio;

$x_t$  = several independent variables;

$\varepsilon_t$  = residual variable

The independent explanatory variables used in this study are the ones mentioned above: the profitability of the company, its size, asset tangibility, liquidity and asset turnover.

Furthermore, the linear multiple econometric model is considered to be of the following shape:

$$y_t = a + bx_{1t} + cx_{2t} + dx_{3t} + ex_{4t} + fx_{5t} + \varepsilon_t,$$

where:

$y_t$  = the debt ratio of companies <sup>not</sup> DebtRatio;

$x_{1t}$  = the profitability of company  $i$  at time  $t$ ,  $x_{1t}$  <sup>not</sup> Profitability;

$x_{2t}$  = the size of the company,  $x_{2t}$  <sup>not</sup> CompanySize ;

$x_{3t}$  = the assets' tangibility,  $x_{3t}$  <sup>not</sup> AssetTangibility.

$x_{4t}$  = the liquidity of the company,  $x_{4t}$  <sup>no</sup> Liquidity

$x_{5t}$  = the assets' turnover,  $x_{5t}$  <sup>not</sup> AssetTurnover;

From an econometric point of view, the existence of individual effects imposes the choice for an estimation method that would produce non-shifted results. Where there are individual effects and they are correlated with the independent variables, the OLS estimation produces shifted and inconsistent results, which we didn't quite agree with. Under these circumstances, it would be recommended to use an estimation method that takes into account the presence of individual effects and that produces non-shifted results, such as the FEM.

#### 4. Simple regressions – results and interpretations

At first, the following simple models were considered for estimation using linear regressions on the panel data for the analysed companies:

Model no 1:  $y_{it} = a_i + bx_{1it} + \varepsilon_{it}$ ,  $x_1$ - the profitability of the company

- Model no 2:  $y_{it} = a_i + bx_{2it} + \varepsilon_{it}$ ,  $x_2$ - the size of the company  
 Model no 3:  $y_{it} = a_i + bx_{3it} + \varepsilon_{it}$ ,  $x_3$ - the assets' tangibility  
 Model no 4:  $y_{it} = a_i + bx_{4it} + \varepsilon_{it}$ ,  $x_4$ - the liquidity of the company  
 Model no 5:  $y_{it} = a_i + bx_{5it} + \varepsilon_{it}$ ,  $x_5$ - the assets' turnover

**Table 1** The DebtRatio modelling using the OLS/FEM estimation method

Model no.		(1)	(2)	(3)	(4)	(5)
Constant	OLS	0.36408** * (0.000)	-0.022562 (0.9743)	0.47509** (0.0353)	0.42524** * (0.000)	0.23533** (0.0465)
	FEM	0.36655** * (0.000)	2.44432* (0.0835)	0.57784** * (0.0015)	0.3488 *** (0.000)	0.31615*** (0.000)
Profitability	OLS	-0.268467 (0.6700)				
	FEM	-0.156546 (0.3539)	-	-	-	-
Company Size	OLS		0.022974 (0.5741)			
	FEM	-	-0.121395 (0.1387)	-	-	-
Asset Tangibility	OLS			-0.146097 (0.6118)		
	FEM	-	-	-0.288945 (0,2106)	-	-
Liquidity	OLS				-0.83156* (0.0797)	
	FEM	-	-	-	0.319186 (0.4540)	-
Asset Turnover	OLS					0.343348 (0.1448)
	FEM	-	-	-	-	0.137296 (0.3681)
No of observations		39	39	39	39	39
$R^2$	OLS	<b>0.004963</b>	<b>0.008618</b>	<b>0.007032</b>	<b>0.080701</b>	<b>0.056577</b>
	FEM	<b>0.974919</b>	<b>0.976247</b>	<b>0.975634</b>	<b>0.974612</b>	<b>0.974869</b>
Adjusted $R^2$	OLS	<b>-0.02193</b>	<b>-0.01817</b>	<b>-0.01981</b>	<b>0.055855</b>	<b>0.031079</b>
	FEM	<b>0.961877</b>	<b>0.963896</b>	<b>0.962963</b>	<b>0.961409</b>	<b>0.961800</b>

Source: Authors' processing in Gretl

Note: Within parentheses there are the p-values, and \*\*\* designates the 1% significant coefficients, \*\* designates the 5% significant coefficients while \* designates the 10% significant coefficients.

After estimating the models' coefficients, the following simple regressions were obtained with the FEM technique:

Model no 1	$DebtRatio_{it} = 0.355655 - 0.156546 Profitability_{it}$
Model no 2	$DebtRatio_{it} = 2.44432 - 0.121395 CompanySize_{it}$
Model no 3	$DebtRatio_{it} = 0.577847 - 0.288945 AssetTangibility_{it}$
Model no 4	$DebtRatio_{it} = 0.348803 + 0.319186 Liquidity_{it}$
Model no 5	$DebtRatio_{it} = 0.316152 + 0.137296 AssetTurnover_{it}$

The above presented regressions may be interpreted as follows:

Model no 1: For a one unit increase of  $Profitability_{it}$ , the  $DebtRatio_{it}$  will decrease, on average, with 0.156546 units.

Model no 2: For a one unit increase of  $CompanySize_{it}$ ,  $DebtRatio_{it}$  will decrease, on average, with 0.121395 units.

Model no 3: For a one unit increase of  $AssetTangibility_{it}$ , the  $DebtRatio_{it}$  will decrease, on average, with 0.288945 units.

Model no 4: For a one unit increase of  $Liquidity_{it}$ , the  $DebtRatio_{it}$  will increase, on average, with 0.319186 units.

Model no 5: For a one unit increase of  $AssetTurnover_{it}$ , the  $DebtRatio_{it}$  will increase, on average, with 0.137296 units.

Table 1 compares the  $R^2$  and the adjusted  $R^2$  of these models. The negative values for the adjusted  $R^2$  might point out towards some useless regressors in the model.

We may notice that the adjusted  $R^2$  reaches the maximum value of **0.963896** for model no 2. We may further say that  $x_{2it}$  representing the size of the company would have the highest explanatory power and model no 2 is the most representative among the other studied models. Still, by taking into account the p-values, the only significant coefficient is that of liquidity with OLS, in model no 4.

## 5. Multiple regressions – results and interpretations

Furthermore, we have considered multiple regression models, for the  $DebtRatio$  as the dependent variable and the above mentioned independent variables, on turns. We have estimated the coefficients of these models and we have compared the values obtained for the adjusted  $R^2$ . The model having the maximum adjusted  $R^2$  points out the fact that the independent variable used for that regression has the highest explanatory power. To follow, it will be considered for another series of multiple models, together with another independent variable, and so on. Knowing that an adjusted  $R^2$  that increases as we add more independent variables in the model points out that the explanatory power of the regression increases, we have obtained the models presented in Table 2.

The below presented results point out the fact that size and asset turnover seem to determine the debt ratio of companies, according to model no 8. For model no 9, asset turnover was found significant for the leverage of the analysed companies. Nevertheless, model no 10, the last and most complex model, suggests that profitability, liquidity and asset turnover are significant for the Cluj listed companies.

Summing up, the relationships between the explanatory variables and the DebtRatio as a dependent variable for the Cluj area companies listed on the BSE, we may conclude that the following relationships were validated:

- a positive relationship between company size and its debt ratio;
- a positive relationship between asset turnover and the debt ratio;
- a negative relationship between profitability and debt;
- a negative relationship between liquidity and debt.

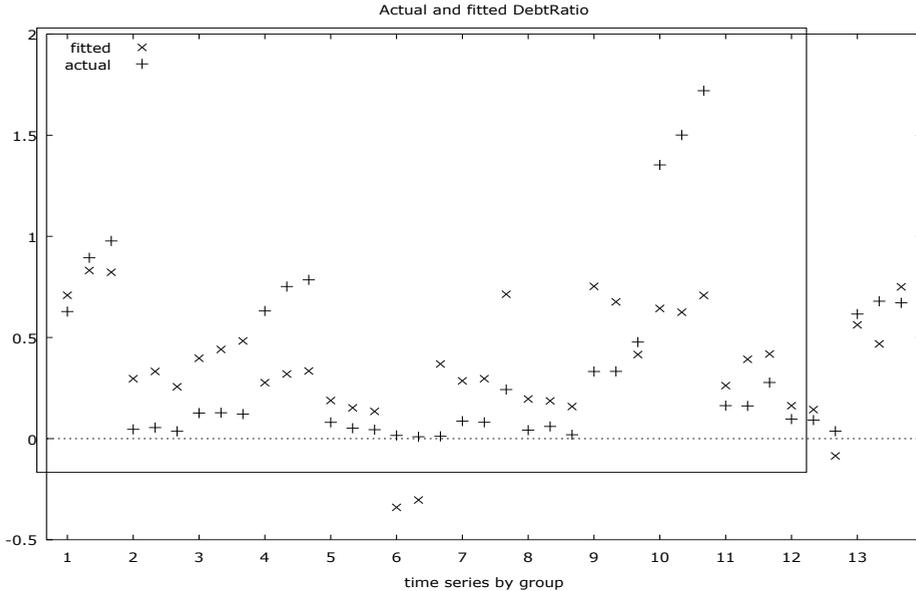
**Table 2** The DebtRatio modelling through multiple regressions:

	Model no	(6)	(7)	(8)	(9)	(10)
<i>Constant</i>	FEM	0.366555** * (0,000)	2.44833 (0,1858)	2.28033 (0.3692)	3.48074 (0.2181)	3.64443 (0.1998)
	OLS	0.364089** * (0,00001)	-0.0443237 (0,9502)	-1.29585 (0,1397)	-1.78530* (0,0580)	-0.490412 (0,5877)
<i>Profitability</i>	FEM	-0.156546 (0,3539)	0.0007464 (0,9972)	-0.0092694 (0.9695)	0.0879174 (0.7359)	-0.0162759 (0.9540)
	OLS	-0.268467 (0,6700)	-0.286346 (0,6529)	-0.574181 (0,3522)	-0.976490 (0,1490)	-1.49415** (0.0188)
<i>Company Size</i>	FEM	-	-0.121628 (0,2581)	-0.112273 (0.4385)	-0.163225 (0.2899)	-0.159211 (0.3028)
	OLS	-	0.0238783 (0,5639)	0.082277* (0,0836)	0.0630676 (0,1922)	0.0166132 (0,7094)
<i>Asset Tangibility</i>	FEM	-	-	-	-0.347552 (0.3134)	-0.634828 (0,1703)
	OLS	-	-	-	0.829728 (0,1580)	0.301848 (0,5746)
<i>Liquidity</i>	FEM	-	-	-	-	-0.872064 (0,3389)
	OLS	-	-	-	-	-1.8789 *** (0,0026)
<i>Asset Turnover</i>	FEM	-	-	0.0202166 (0.9213)	-0.177720 (0,5303)	-0.101251 (0.7302)
	OLS	-	-	0.630486** (0,0265)	1.17094** (0,0157)	1.15058*** (0,0078)
<i>No of observations</i>		39	39	39	39	39
$R^2$	FEM	<b>0.974919</b>	<b>0.976247</b>	<b>0.976258</b>	<b>0.977353</b>	<b>0.978341</b>
	OLS	<b>0,004963</b>	<b>0.014251</b>	<b>0.145371</b>	<b>0.194722</b>	<b>0.391265</b>
Adjusted $R^2$	FEM	<b>0.961877</b>	<b>0.962392</b>	<b>0.960773</b>	<b>0.960883</b>	<b>0.960808</b>
	OLS	<b>-0,021930</b>	<b>-0.040513</b>	<b>0.072117</b>	<b>0.099983</b>	<b>0.299032</b>

Source: Authors' processing in Gretl

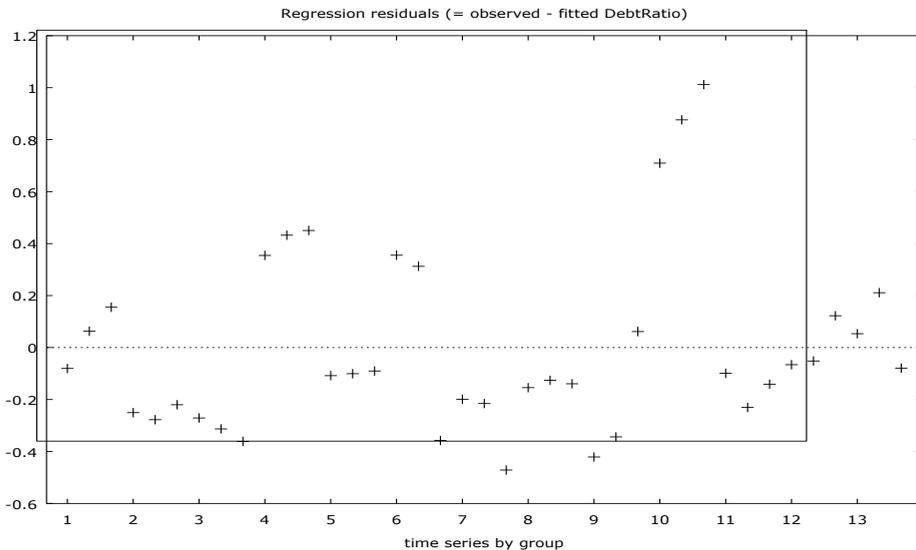
Note: Within parentheses there are the p-values, and \*\*\* designates the 1% significant coefficients, \*\* designates the 5% significant coefficients while \* designates the 10% significant coefficients.

We have graphically represented the experimental values in dark grey + and the ones adjusted by the optimum chosen model (Model no 10) in light grey x, processing the data with the Gretl software, according to Figure 1:



**Figure 1:** Experimental values of the companies' financial leverage (DebtRatio) and the ones adjusted through the 10<sup>th</sup> model –OLS  
 Source: Authors' processing in Gretl

Figure 1 reveals the actual values of the DebtRatio of the sampled companies, and the ones fitted by the most complex model, model no 10. The following figure (Figure 2) represents the regression residuals as drawn by Gretl:



**Figure 2:** Regression residuals for the 2<sup>nd</sup> model – FEM  
 Source: Authors' processing in Gretl

## 5. Conclusions

These estimations reveal the dependence degree between the debt ratio of the studied companies and certain explanatory variables. Company size, asset turnover, liquidity and profitability were found important for the debt ratio of selected companies. The higher the size of the company and its assets' turnover, the more borrowed capital companies use. On the other hand, the higher the liquidity and profitability of these companies, the less borrowed capital they need in order to finance their business.

Because of data inaccessibility, this study was carried out on a reduced number of companies and time periods so the size of the sample is a limitation of this research. Still, as new data become available, this would become a direction for our future research.

All in all, when it comes to financing decisions, after analyzing a number of factors, a company establishes its target capital structure, the one it believes to be optimal, which is then used as a guide for raising funds in the future. Besley and Brigham (2011) consider that „the target might change over time as conditions vary, but at any given moment the firm's management has a specific capital structure in mind, and individual financing decisions should be consistent with this target. If the actual proportion of debt is below the target level, new funds will probably be raised by issuing debt, whereas if the proportion of debt is above the target, stock will probably be sold to bring the firm back in line with the target debt/assets ratio". All in all, the debt ratio presents a particular importance for each company, regardless of its activity field.

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# THE ROLE OF SAVINGS RATE IN DEEPENING MACROECONOMIC IMBALANCES IN CHINA

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**Abstract:** *It is well known that China is a growing power and its impressive economic indicators have been the subject of numerous studies along the years. China's impressive economic growth in the years 2000 based on one hand by an expansionary monetary policy, on other hand by promoting export growth had also brought into discussion another factor: that of the high savings rate. This article brings into light China's high savings rate -household, corporate and governmental- each with its role played in the entire equation of China's growth. There have been a lot of studies concentrating on this relationship between savings rate and economic growth. It appears that, in the case of China there is a positive relationship between high savings and high economic growth at least on the short run. This is due to the national savings rate which contributed to current account surplus that facilitated outflow and inflow of capital. Domestic investments and foreign growth had contributed to rapid economic growth despite the low level of consumption. If we add here the low demand for imported goods and the growth of households saving rate in the last year we have an image of deep macroeconomic imbalances. Furthermore, if we add to this analysis the idea of an external saving rate that proved to grow quicker than the world capacity to absorb this flows we have a vivid image of an empire as „rich country, poor population”. This high savings rate in the long run will deepen macroeconomic imbalances. As a spiral this would have to accelerate reforms in the field of pensions, healthcare, social security. On top they would have to encourage the development of the banking system in order to create an image of a powerful country also in the long run. With these internal reforms the savings rate for households will encourage consumption and a normal level of savings, for corporations it will boost investments and for government it will lead to a balance account closer to reality and better use of the incomes.*

**Keywords:** savings rate, current account, monetary policy, macroeconomic imbalances.

**JEL classification:** E21, F32, H62, J11

## 1. Backgrounds

In 1957 Friedman created the permanent income hypothesis in which he stated that a rational consumer will save only when their current income is higher than anticipated future permanent income. China is one of the Nations with a rapid economic growth rate, but at the same time it has one of the highest rates of saving. And that's highly due to the high rate of household saving.

Conventional perception is that saving contributes to an increase in investment and GDP growth in the short term, as demonstrated by several authors over time such

as DeGregorio, Jappelli and Pagano (1994). The basic idea was induced by Lewis (1995) - a sustained increase in the rate of savings will lead to an acceleration of economic growth. Carroll, Overland and Weil (2000) concluded that "if utility is partially dependent of the way in which consumption is assimilated by a habit stock determined by a past habit then a standard economic growth model can cause increase in consumption rate". There are also several studies that show an interdependent relationship between these two variables, like an increase in economic growth will lead to higher savings rate and vice-versa. Carroll and Weil in 1994 proved this relationship between OECD countries, the exception was a study realized by Baharumshah in 2003 for Asian countries - an econometric study between 1960-1997 for North Korea, Thailand, Malaysia, Singapore. The only country that proved the original causality relationship was Singapore.

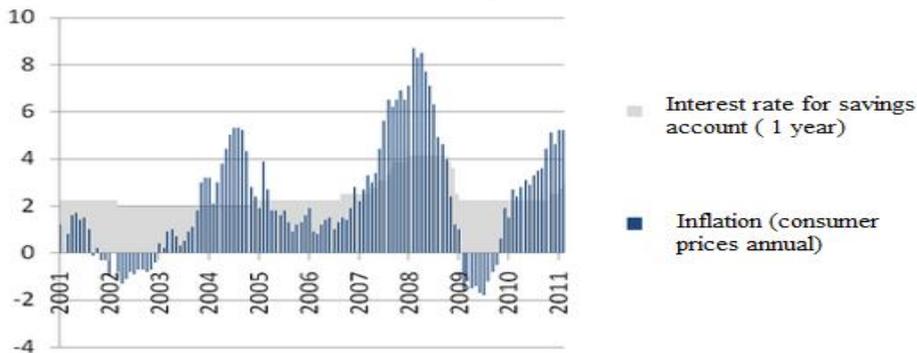
## **2. The savings rate in China – facts and figures**

It is well known that a country like China has a high level of savings rate and determined not only by the household savings, but also corporate and governmental. In regards to the rate of household saving, there have been many reasons over the years listed as the explanation of the high rate of growth. The population in China were taught to save over the years. One of the main reasons might be due to the regime and their caution. There might also be considered pollution-related problems, an underdeveloped social system, and high rates of poverty, limited medical insurance and low access to the healthcare system. The efforts of the authorities to reduce the savings rate will prove unsuccessful if prior to these, a more advanced social, healthcare system will not be created.

So, there are three main elements in sustaining China's high level of savings rate: education, pension system and health. The pension system needs reform. The demographic policy adopted in late 1970s "one child per family" resulted in strengthening the idea of self-sustaining after retirement. In this context, a study conducted by Modigliani and Cao (2004) demonstrated that households saved around 5% of income before 1978. In contradiction with the elderly, people at middle age rely upon revenue growth to achieve a target saving rate. In 2010, another study by Charmon and Prasad, showed that populations at middle age in China, in contrast with other states save less compared to young or old population. This demographic policy would lead to a decrease in household saving rate due to the fact that by 2050 there will be an increase in the elderly population.

Apart of these demographic and social factors, we might add the lack of competition in regards to the bank services offered to the population. Figure 1 shows the evolution of inflation and the interest rate for 1 year saving deposits between 2001 and 2011:

**Figure 1.** Evolution of interest rate (saving deposits) and inflation 2001-2011

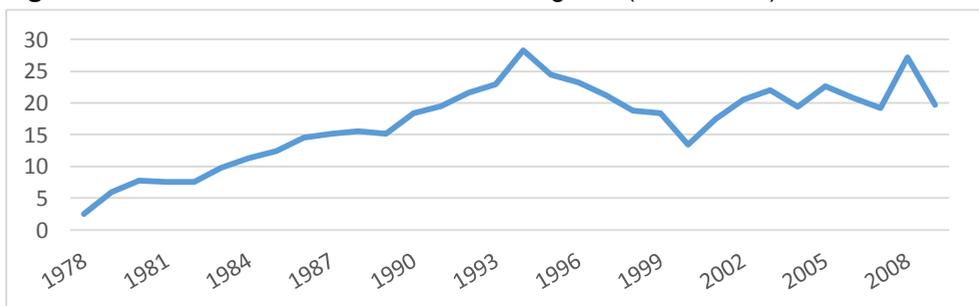


Source: People Bank of China, National Bureau of Statistics

Due to the increase of inflation between 2007 and 2008 and again in 2010-2011, the household savings rate decreased. It was also the objective of the government that tried to increase consumption in order to boost the economy. Although the overall countries savings rate increased from 37,3% to 52,4% between 2002 and 2008, in the last decade the percentage of the household savings rate decreased by 10%. These statics however showed that the population saved less at banks, and the international banking liquidity crisis highly also contributed.

There were a lot of reforms during the years that we consider important in determining the level of saving. Between 1950 and 1978, all the houses were given by the authorities at affordable prices. Between 1982 and 1985, a program of privatization of public houses was lunched, that proved to be a failure due to the lack of financial incentives to sustain the credits. In 1991, Shanghai developed a public system to finance the cost of buying a house which granted fund to the real-estate developers in order to build new houses. The most important reform was in 1998 when the state adopted a new Directive in order to increase the number of households that lead due a real " housing bubble".

**Figure 2:** Evolution of overall household saving rate (1978- 2009) %



Source: Authors' calculation after Federal Reserve Bank of Saint Louis, 2012

We can compare this percentage with the state reforms. When the state was responsible with household granting, the savings rate was only 2.5%. At the beginning of 1990 it was 20 and 25%. The more important raise was registered between 1994 and 2008. 2008 marked the year of the fiscal package stimulus

implemented by the government as a response to the financial crisis. As a result, a large number of people gained access to credits in order to acquire a house.

In regards to corporate savings, an important factor is the tendency of firms to retain earnings. According to data from Worldscope, more than half of China's listed companies in the industries have not paid any dividend over the past decade. In comparison, in countries like India, Singapore, Korea, Japan the percentage was around 30%. In 2008, only, the profit reported by Chinese listed companies was of only 36 percent of the total profits recorder by all companies. The same authors argued that the high rate of corporate saving is due to the high rate of State-owned companies because of the fact that leadership and corporate savings are a key element in achieving the current account surplus. The rate of payment of dividends, which reflects the percentage of earnings paid out as a dividend to shareholders decreased by 10% since 2001. Due to the role played by these gains, increase corporate savings withheld are closely linked with the growth of corporate profits. Their earnings were around 30% per year, from 2000 onwards, the wage growth rate of 15% per annum. One of the explanations for this increase in profits could be caused by a surplus of rural labor capital factor that increases wages and outlasted wages increase and boost profits. The assumptions regarding the causes of earnings were retained. Here we mention as possible causes, few dividends paid by Chinese firms. And as explanation of why most net gains have been retained by these companies - namely underdeveloped financial system and poor corporate governance, low access to credits of small companies that could lead to a decrease in wages that brings low productivity and low profits. Other reason might be the entry barriers that limit the development of services in which labor is very important. We also have to consider the fixed exchange rate and the interest rate. There are other economists that say that this exchange rate leads to an increase in household savings and other that state that it is a confusing role between the exchange rate and current account because China's exchange rate fluctuated along the years and renminbi is stronger than other currencies from emerging countries(Chinn and Wei, 2009).

Sources of disposable income and governmental savings (million Yuan) are, according to Central Bank of China value added in production (1), labor compensation (2), net taxes on production (3), net income from production (4), net current transfers (5), disposable income (6), consumption (7). We calculated the total net income as  $(1) + (3) + (4) + (5) - (2)$  and savings as  $Savings (6) - (7)$

The percentage of Government saving rate has fluctuated quite a lot, at a level below the 4.4% between 1992 and 1999, reaching a minimum of 2.6% in 1999 to a level of 10.8% in 2007. Disposable incomes of the Government, composed mainly of Government production, property income, taxes on production, income from taxes and social security income without compensation on the labor increased from 1608.9 billion Yuan in 1999 to 6308.4 billion Yuan in 2007. The increase in revenue from taxes on production contributed most to the increase in government revenues during this period. This was mainly due to the increase of investment in that country as a result of cheap labor and aid offered by the authorities to increase the use of the labor cooperatives in the country. It also led to an increase in the number of branches created by multinational companies in the country. It also lead to an increase in net taxes to 65% in government incomes. The main foundation was the 1994 fiscal reform. Thus, from a low level of net income as a percentage of GDP at the beginning of the 1990's, effective system of tax collection, along with a growth of approximately

10% per year growth led to an increase in Government revenues from 1999 to 2007. The second largest contributor to government revenues are net current transfers. According to the data provided by the Central Bank, the Government has shown a consistent increase in revenue, and an increase in government savings. All of these contributed to China's image of "rich country, poor population". However, although we note a striking change in relation to the revenue collected by the Government and as a result an increase in the rate of accumulation, tax collection percentage remains low compared with other economies such as Japan, the US and Germany (Yang et al., 2011).

It is obvious that the aggressive growth policy has facilitated the increase in saving. And monetary policy, which is supposed to have a decisive role and a strong impact on long-term interest rates and economic activity in general will affect corporations largely through the establishment of future revenues and dividends paid. It therefore directly affects savings rate of corporations. Monetary policy by determining the interest rates on deposits will directly affect the population and their saving rate. It led to the increase in government revenue.

There were a lot of voices during the years that talked about the effects of high rates of savings in the long run. Under the terms of 50% savings rate, consumption was sacrificed. Keynes said that "consumption-to repeat the obvious-is the goal and the ultimate objective of all economic activities". The high saving rate has allowed the Government to adopt policies of rapid growth. Unlike other developing States with high volume of imports the promotion of exports (partly due to the high level of savings) it allowed the development of several industries and also the creation of preconditions for technological development. There are voices, such as the Economist (2008) in which the economist Lardy highlighted the fact that the level of savings helped save the banking system, blamed for the large number of non-performing loans. Furthermore, it argued that the revenue brought in by households savings has helped to sustain the banking system by boosting savings deposits.

A lot of economists have expressed concern over this increase in current account surplus from China. They warn that it grows more than the world's capacity to absorb. Meanwhile these flows are likely to become even more dangerous in the context of all the austerity measures adopted by several countries that made the aggregate demand to decline. This has left many countries under the threat of „liquidity trap” in which the Chinese trade surplus could be interpreted as a policy of so-called "beggar-thy-neighbor". This exports the unemployment from China as a country in the period of economic boom to countries with already high levels of unemployment and low rate of GDP growth.

Among the most notable and obvious developments of Chinese economy there were impressive growth rates on both saving and exports, thus the current account surplus. These indicators have had an upward trajectory, especially after China's accession into the World Trade Organization (WTO). And this impressive accumulation of capital, including during the crisis have resulted in an increase of foreign reserves, almost 3 times higher than those of Japan, the second place in the world in this perspective. It is obvious that with WTO, China's business climate has become more attractive, and the profitability of firms has increased. However, due to the institutional rules that were meant to facilitate the promotion of exports, a large part of these gains have been saved in the corporate sector or collected by the Government, which has led to higher savings rate. This, along with low consumption,

low demand for imported goods and the growth of households' saving rate has resulted in deepening macroeconomic imbalances.

Furthermore, these imbalances are a real danger, particularly for an economy like that of China. Low consumption rate as a percentage of GDP implies that the rapid economic growth of China in recent years has been encouraged by domestic investments and foreign growth. And this practice by supporting increased growth and trying to avoid external shock and limiting unprofitable investments will become more and more difficult in light of the current economic crisis and the turbulence generated by the euro zone crisis. Moreover, due to massive foreign reserves in dollars or bonds denominated in euros, China is subject to major risks in case the euro and the dollar depreciates (Sheng and Liugang, 2011).

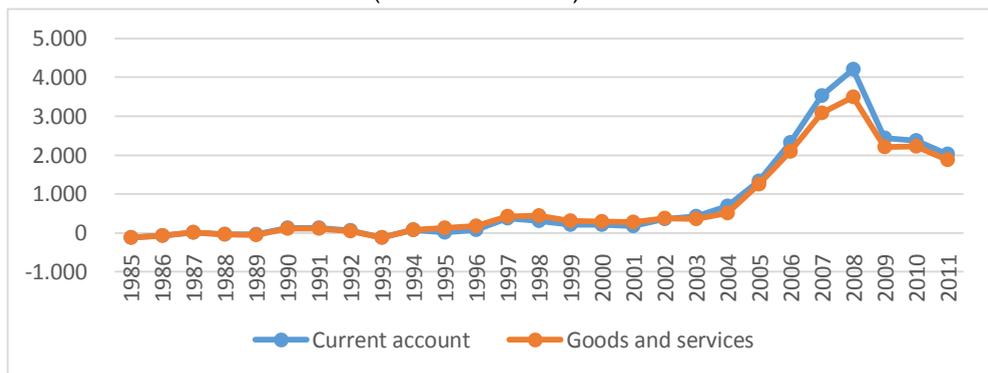
### 3. The external account balance of China – the present situation

The balance of payments includes payments and revenues made by a country that reflects all stock flows across the border of a country with the rest of the world over a period of time. To analyze China's foreign imbalances we consider this flows as being most representative of the current account, foreign direct investment and foreign currency reserves.

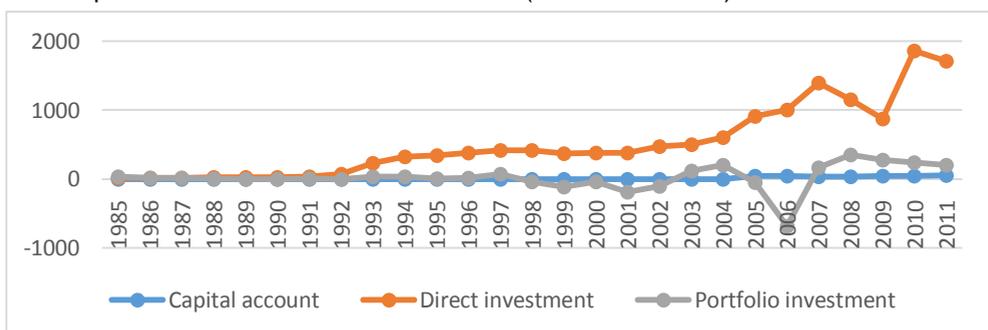
We will analyze the most important trends of China in the external account balance. Thus, we will consider the evolution of the balance of the current account, the capital account and the foreign currency reserves during 1985-2010.

**Figure 3:** International balance of payments of China 1985-2010

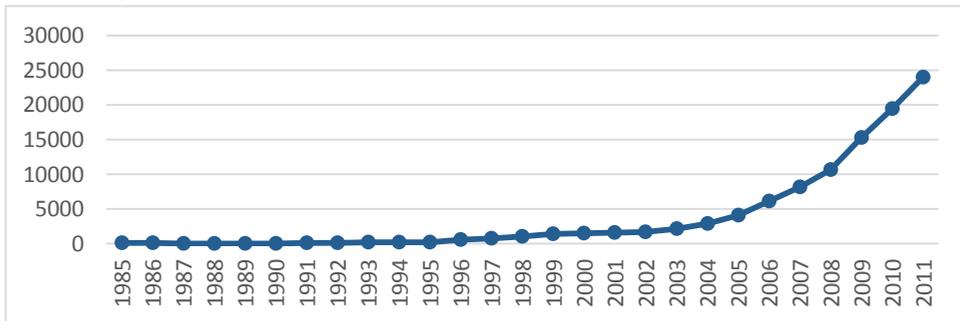
#### 2.1. Current account evolution (100 million USD)



#### 2.2. Capital and financial account evolution (100 million USD)



### 2.3. Foreign reserve evolution ( 100 million USD)



Source: Authors' calculation after State Administration of Foreign Exchange

In regards to trade development, we note that there are undetectable imbalances at the beginning of the 1990, even deficit being recorded in some years. A significant change is noted as from 2001, the surplus grew considerably, especially in the years 2005-2007. On the other hand we have highlighted the development of trade in goods and services. There is a similar, sometimes identical to the developments in the current account surplus.

Although we note an increase in the surplus in the beginning and middle of 1990, we can say that the capital account was more or less balanced even before the entry of China into WTO (2001). After this event, however, the current account recorded a surplus due to the opening of the economy. We also have a large increase in foreign direct investment since the beginning of the 1990. Moreover, China has become the second most attractive country for such investment, after the United States (according to the data supplied by OECD). In the light of the financial crisis in 2008, both foreign direct investment and portfolio investments decreased, but remained at a high level, reaching in 2010 to a surplus of 4% of GDP. All these major surpluses in the current account and the capital account resulted in an explosion of foreign currency reserves. In 2000, China held 10.9 billion dollars in reserves, equivalent to 0.9 percent of GDP. In 2012, according to the US treasury has reached the level of 45% of the GDP in 2011. Much of China's assets are invested in US Government bonds with a slow recovery.

If balance of payments statistics recorded stock flows across the border in exchanges and capital, net foreign assets statistics provide the capital position in the economy's related to financial assets and liabilities. A surplus in the current account is flagged with an increase in net foreign assets, while a deficit of current account brings a drop in net foreign asset position (Yang, 2012).

And as the current account surplus kept growing after 2001, it became increasingly clear that accumulating foreign reserves is directly connected with the fixed exchange rate policy. Thus, it is a continuous expansion of current account surpluses and capital inflows. With all the efforts of the authorities to limit the increase in reserve requirements by trying some of the stresses and strains of withdrawals capital they proved ineffective in light of the fixed exchange regime.

According to data supplied by the same source, SAFE, in 2011, in just 10 years after the onset of the fulminating expansion of China after the year 2000, China has gradually become a major creditor of the whole world. Thus, in these 10 years the position of foreign net assets grew from a borrower's debt of 6.2% of GDP in 2000

to a net lender about 30.5 percent of GDP. And here, a very important role was played by the foreign currency reserves as it reaches even half of GDP. The top 10 countries in this statistics hold together 2/3 of the total foreign exchange reserves in the world. For a country considered one of the major contesters of the role of the dollar on international markets makes an important job in enhancing this role. Through the enormous quantities of dollars bought, China maintains, artificially the price of the dollar high and the price of its own currency, artificially low- thus promoting the dollar as a reference currency. In order to maintain fix exchange rate the Chinese authorities buys every day 1 billion USD from the exchange market (Bergsten, 2010). The same tactic is observed at Hong Kong, Malaysia, Singapore, Taiwan in order to maintain a competitive position versus that of China.

There are different opinions towards the role played by the surpluses and deficits in realizing economic growth. Imbalances are general considered dangerous. And along the time, the developed countries proved this theory.

According to Figure 2, several imbalances are noticeable along the years. We note, for example, in 2005, that developed States registered surplus, while those emerging states registered deficit. From the beginning of 2000 and until 2010, the situation was reversed. If we look at the situation in 2000 up to the years of the crisis, in 2008 we can say that the developed States' deficit was increasing and the emerging States surplus grew even four times since 2000. However, the developed States registered important economic growth. By the year 2008 China's situation had changed, reaching a surplus of 435.9 billion dollars, 15.1 percent of the total surplus recorded by the entire group in transition. In 2008, the U.S. had a surplus almost double than that of China, and three times as high as that of Germany. As China had the largest surplus of emerging countries, emerging group reached half of the surplus recorded in 2008, and developed countries have reduced the deficit four times as compared to 2008.

**Table:** Global current account balance (billion USD)

Country	1995	2000	2005	2008	2010
Developed economies	29,8	-270,6	-411,2	-471,8	-95,5
Japan	111,4	119,6	165,7	157,1	194,8
USA	-113,6	-416,4	-747,6	-668,9	-470,2
EURO zone	70,5	-39,4	41,4	-86,7	11,6
Germany	-29,6	-32,6	142,8	245,7	176,1
Spain	-1,8	-23,1	-83,3	-156	-63,3
Other advances nations	-38,5	65,6	129,7	126,7	168,4
Norway	5,3	25,3	49,1	79,9	53,3
Australia	-18,4	-15,3	-41,7	-47,2	-31,7
Emerging countries	-92,2	95,2	443	704,2	378,1
Asia	-36,9	41,7	167,5	435,9	308,1
China	1,6	20,5	160,8	436,1	306,2
India	-5,6	-4,6	-10,3	-24,9	-49
Middle East and North Africa	-1,2	80,4	212,7	343,1	152,8
Sub Saharan Africa	-9,9	2,1	-3,4	0	-24,9
Latin America and Caribbean's	-37,9	-48,4	36,3	-31,2	-56,9
Central and Eastern Europe	-10,2	-28,9	-57,7	-151,3	-76

Former Soviet Union	3,8	48,3	87,6	107,7	75
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Source: IMF, World Economic Outlook, 2011.

#### 4. Conclusions

Thus, the most important role that the savings rate will play in creating imbalances in the Chinese economy is the external savings rate. Thus, we analyzed several pathways through which it could achieve a decrease in the short or long term in external savings rate. Even though this rate of accumulation is due to long term causes we believe that in the short term, certain actions may prove successful.

- On the short run:

Considering the fact that the current account surplus is the difference between national investment and national savings, we can say that encouraging private investment can be a solution even though it may not affect national saving rate. If a large portion of those savings would be attracted to the national investment, the result would be a decrease in foreign savings and it will eventually lead to a fall in unemployment, and perhaps even to an increase in the labor productivity.

Encouraging private investment is important, as all short term economic stimulus packages have encouraged domestic investment. A short-term economic policy to encourage public investment from the Government could lead to a fall in unemployment and the rural and urban infrastructure, as example. Other short-term solutions could stimulate private consumption through the granting of tax exemptions for owners of small and medium enterprises to promote investment in new equipment and modernizations. Another way would be to boost household consumption. Because of the reasons listed above in this analysis this could prove difficult due to the consumption habits. However, a solution could be the lowering of fees such as taxes on property or cars or others.

- On the long run:

One of the long-term solutions that could be taken into consideration could be the development of the banking and financial system and to modernize the social security system in order to reduce the rate of saving, which would have a beneficial effect upon encouraging consumption. Carroll (2010) proposes a system of "pay as you go" in order to resolve the problems of the pension scheme. Through it, payments of fees from the active labor force would be used to finance the pensions of current elderly. It would bring a sense of security among people currently employed by creating a secure income in the retirement years and it will lead to a decrease in the rate of saving. Also, we might add here a solid system of insurance in case of loss of employment. There might be introduced a series of limited-term income to encourage finding a new job. Also, we recommend creating a developed and competent social health insurance to cover the cost of daily care problems and some extraordinary costs as well, in order to discourage population to save as to get good health package.

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## MODEL AND RATING ANALYSIS IN THE HOSPITALITY INDUSTRY

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**Abstract.** *For any investor, the economic entity's financial reporting contributes decisively to a decision on maintaining the operational management team, changing it, purchase new shares or sell shares in that company. For this reason we think it is very important that an assessment of the entity's financial performance should be made and build a credit rating model to generate a fair and reasonable picture of it.*

**Keywords:** *performance, rating, bankruptcy*

### 1. Introduction

In evaluating the rating of economic entities, credit banks use their own rating systems. In bank lending, credibility is an essential element of moral and material support without which a credit may not be granted. Thus, customer knowledge is a key aspect which is achieved through a thorough analysis and documentation to evaluate the reality of the patrimonial and financial situation of the entity.

The default risk is an important issue that has been and continues to be in the attention of managers as they are always interested in the smooth running of the production cycle. Also, both investors and lenders study and observe the bankruptcy risk of a company as they are interested in recovering loans and interest.

The essential problem for any stakeholder is "anticipate risk, and minimize its occurrence and control it."<sup>1</sup>

All models of bankruptcy are based on a scoring function which is used to determine whether the company will go bankrupt or will it achieve good results in the next period of analysis.

In recent years, the economy has led tens of thousands of companies in Romania into insolvency, the figure increasing annually, respectively in 2012 a number of 21,692 companies became insolvent compared to 19,894 in 2011 and relating the net turnover of the companies entered into insolvency this is evolving exponentially. In these market conditions, financial performance evaluation of the operational activities and financial activities of the entities has a very important role in the economy of enterprises, both in terms of their own situational awareness and regarding the financial standing of their business partners.

Financial standing targets the quantitative side of the economic entity where the indicators are based solely on financial standing and they form the basis for determining a score, which classifies the economic entity in a particular class of financial performance or a rating class.

The quantitative side of the entity refers to indicators such as liquidity, solvency, profitability, leverage, indicators that send the first signal of danger for any business.

Financial standing is primarily used by banks to analyze creditworthiness of the enterprise asking for a bank loan, these banking institutions then fitting the entity into a performance class from „A to E”, based on a certain score. Regarding the practical part of the paper we used the information presented in the financial statements of SC Tourism Aries SA, with the help of which we then calculated the financial standing indicators used in the rating models, respectively banking models and also models regarding bankruptcy analysis, all of these providing information concerning the financial standing of the economic entity.

## 2. Methods and results

Eating type analysis is based on a series of economic and financial indicators used in financial analysis, indicators considering the financial strength of the company.

Subject of financial analysis is the assessment of the company's financial policy in a prior period and facilitate future decisions. This is based on the financial statements of the company, but also on other sources of information.

Determining a company's rating, together with the rating of underlying securities represent the foundation stone for the approval of a loan, its cost( interest rate), but also the decision to continue financing a company or not, in case of a rating downgrade. The rating system is a unitary system in accordance with Basel II regulations on internal rating system approach.

At the base of rating analysis are three basic principles, namely:

Clear rating responsibilities;

- Strict enforcement of the "four-eyes" principle in the rating process;
- Rating authorisation independent of the account management.
- The credit rating must be sub-divided into three parts, as follows:
- The proposal rating is made by management account or credit analysis;
- Approval by analyzing credit rating;
- Approval rating by those who make decisions for the client.

According to Basel II client rating is unique, that each borrower has a credit rating level which he is assigned after the rating analysis.

To analyze company performance by bank based models (BRD - GSG and Transilvania Bank) and statistical and mathematical models : Altman, Robertson, we built a rating model, based on the following indicators: rotation of current assets, current liquidity ratio, solvency, financial profitability rate and indebtedness.

The results obtained from analysis using our own model can be seen in the following table:

**Table 1: Model of Rating**

	Accomplished 31.12.2008	Accomplished 31.12.2009	Accomplished 31.12.2010	Accomplished 31.12.2011	Accomplished 31.12.2012
<b>1) Current assets rotation</b>					
Turnover	195 677 945	229 415 602	215 805 947	219 754 104	243 626 062
Current assets	153 843 727	181 193 103	202 832 790	217 978 254	224 267 724
Spin current assets	1,27	1,27	1,06	1,01	1,09
Score given	0,0	0,0	0,0	0,0	0,0

<b>2) Current liquidity rates</b>					
Current assets	153 843 727	181 193 103	202 832 790	217 978 254	224 267 724
Current liabilities	77 535 385	92 833 964	118 829 602	120 634 820	116 234 517
Current rate	198,42	195,18	170,69	180,69	192,94
Score given	10,0	10,0	10,0	10,0	10,0
<b>3) Solvency</b>					
Equity	177 059 654	246 249 761	246 904 973	242 024 210	262 612 444
Total debt	83 577 294	99 041 020	121 282 429	134 676 198	130 139 154
Solvency	211,85	248,63	203,58	179,71	201,79
Score given	10,0	10,0	10,0	10,0	10,0
<b>4) Financial return rates</b>					
Net-Profit	23 839 146	32 456 007	10 572 756	11 907 807	12 359 100
Own Assets	177 059 654	246 249 761	246 904 973	242 024 210	262 612 444
Financial rate return	13,46	13,18	4,28	4,92	4,71
Score given	9,0	9,0	4,0	5,0	5,0
<b>5) The degree of debt</b>					
Attracted term debt +(total debt = debt < a year + grants + inv + proviz.risc deferred income)	83 577 294	99 041 020	121 282 429	134 676 198	130 139 154
Total assets	260 636 948	345 290 781	368 187 402	376 700 408	392 751 598
Indebtedness	32,07	28,68	32,94	35,75	33,14
Score given	9,0	10,0	9,0	9,0	9,0
<b>TOTAL SCORE</b>	<b>38,00</b>	<b>39,00</b>	<b>33,00</b>	<b>34,00</b>	<b>34,00</b>
<b>Mark</b>	<b>Good</b>	<b>Good</b>	<b>Good</b>	<b>Good</b>	<b>Good</b>

Source: the company's own financial statements

Analyzing the indicators that comprise the model, we have:

- Current assets rotation decreased between 2008-2011, due to the current assets growing faster in this period compared to the net turnover, this increase being given especially by the debts is approximately 80% of current assets. In 2012 Current assets rotation increased by 7.75% on account of the advance of turnover in relation to current assets;
- The current liquidity ratio decreases in 2009 and 2010 compared with the previous year by about 2% and 12.5%, due to the faster increase in current liabilities than current assets, the company obtaining some loans at this time. In 2011 and 2012 the current liquidity ratio increases by about 6% -7%;

- Solvency decreases in 2010 and 2011 because of rising debt levels, followed in 2012 with an increase of 12.29% compared to 2011 due to a lower debt, the long-term debts being zero;
- Return on equity recorded a decrease of 67.51% in 2010 due to lower net income 67.42% mainly because of a lower activity that year. Throughout the whole period growth is achieved only in 2011, an increase of 14.9% due to the net result of the advance;
- Indebtedness has an upward trend in 2010 and 2011, when it grows by 14.84% and 8.53%, followed in 2012 by a decrease by 7.32% due to lower capital bank liabilities.

It is noted that the company recorded a good rating on all years analyzed, but it is decreasing compared with the total score in 2008 and 2009, going from 39 points in 2009 to 34 points in 2011 and 2012. This is due to lower net income, or profit representing only 61.37% in 2012 compared to the level reached in 2009.

Decrease in profit is due to the decrease in business activity, its turnover in 2012 was below the level of 2009 and lower by about 1.5%, and total expenditure growth, especially operational costs, and these increased by 12 % compared to 2009.

To improve the total score of 2012 and reaching that threshold as in 2009, we assumed the following scenario:

- A 15% increase in production in 2012, from 224,870,563 to 258,601,147, leading to an increase in net turnover, income and therefore the recorded net profit will increase by 72.79% .

Based on these assumptions we obtain the following results:

**Table 2:** The following application scenario own

	Accomplished	Accomplished	Accomplished	Accomplished	Accomplished
	31.12.2008	31.12.2009	31.12.2010	31.12.2011	31.12.2012
<b>1) Spin current assets</b>					
Turnover	195 677 945	229 415 602	215 805 947	219 754 104	277 356 646
Current assets	153 843 727	181 193 103	202 832 790	217 978 254	224 267 724
Current assets rotation	1,27	1,27	1,06	1,01	1,24
Score given	0,0	0,0	0,0	0,0	0,0
<b>2) Current liquidity ratio</b>					
Current assets	153 843 727	181 193 103	202 832 790	217 978 254	224 267 724
Current liabilities	77 535 385	92 833 964	118 829 602	120 634 820	116 234 517
Current rate	198,42	195,18	170,69	180,69	192,94
Score given	10,0	10,0	10,0	10,0	10,0
<b>3) Solvency</b>					
Equity ratio	177 059 654	246 249 761	246 904 973	242 024 210	262 612 444
Total debt	83 577 294	99 041 020	121 282 429	134 676 198	130 139 154
Solvency	211,85	248,63	203,58	179,71	201,79

Score given	10,0	10,0	10,0	10,0	10,0
<b>4) Financial rate return</b>					
Net-Profit Result	23 839 146	32 456 007	10 572 756	11 907 807	46 089 684
Equity ratio	177 059 654	246 249 761	246 904 973	242 024 210	262 612 444
Financial rate return	13,46	13,18	4,28	4,92	17,55
score given	9,0	9,0	4,0	5,0	10,0
<b>5) Indebtedness</b>					
Attracted borrowed capital +(total debt = debt <> a year + grants + inv + proviz.risc deferred income)	83 577 294	99 041 020	121 282 429	134 676 198	130 139 154
Total assets	260 636 948	345 290 781	368 187 402	376 700 408	392 751 598
Indebtedness	32,07	28,68	32,94	35,75	33,14
Score given	9,0	10,0	9,0	9,0	9,0
<b>TOTAL SCORE</b>	<b>38,00</b>	<b>39,00</b>	<b>33,00</b>	<b>34,00</b>	<b>39,00</b>
<b>Mark</b>	<b>Good</b>	<b>Good</b>	<b>Good</b>	<b>Good</b>	<b>Good</b>

Source: the company's own financial statements

Following this scenario we find that the rate of return on equity increased from 4.71% to 17.55% placing the category A.

To increase the company's rating for the financial year 2012 from "Good" to "Very Good" is necessary to increase the rotation of current assets, current assets being at a high level, debts representing 80% of them in 2012.

Compared to 2009 the current assets increased in 2012 by 23.88% and the debt increased by 46.99%, therefore we recommend a tougher trade credit policy, but at the same time to not affect greatly the pace of sales growth.

### 3. Conclusions

To increase the company rating it has to improve its debt collection, but also affecting the least the trade policy in order to increase the net turnover and the net profit, respectively. Another measure that is necessary is to reduce short-term debt especially debt credit institutions, which may be financed through a long-term loan with an interest more convenient, but also because the company has no long-term debt in 2012.

Contracting the long-term loan might help disperse the debts, or a better ratio of current debt in total debt.

According to our rating model we can observe that the company recorded a good rating on all years analyzed, but it is decreasing compared with the total score in 2008 and 2009, going from 39 points in 2009 to 34 points in 2011 and 2012. This is due to lower net income, or profit because it represents only 61.37% in 2012 compared to the level reached in 2009.

Decrease in profit is due to the decrease in business activity, its turnover in 2012 was below the level of 2009 and lower by about 1.5%, and the total expenditure growth, especially operational costs, increased by 12 % compared to 2009.

To increase the company's rating for the financial year 2012 from "Good" to "Very Good" is necessary to increase the rotation of current assets, current assets is at a high level, debts representing 80% of them in 2012.

Compared to 2009 the current assets increased in 2012 by 23.88% and the debt increased by 46.99%, therefore we recommend a tougher trade credit policy, but at the same time to not affect greatly the pace of sales growth.

The analysis of financial performance and risks faced by the company is very important to know in which category of loans is the company framed by banking models, but also to know its risk of failure and to implement effective policies to avoid risk or at least reduce its effect.

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# IMPLICATIONS OF THE FINANCIAL SYSTEM ON THE CAPITAL STRUCTURE OF THE ENTERPRISE

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**Abstract:** *This paper aims to identify the types of financing structures of the economy that exist in European Union countries highlighting the features of each structure. For each type of financing system of the economy identified we observe the financial resources available to companies. Depending on these we identify how there are financed the companies in each market, more exactly what capital structure do they have, and moreover what is the optimal capital structure in each case. So, by this analysis, we want to see if the financing system of an economy influences the optimal structure of the companies operating in the capital market from that country. In various stages of development of the financial system, the company financing depends on the general characteristics of the environment in which the enterprise operates. The financing system existing in a country plays an important role on the capital structure of an enterprise from that country because, according to the specific of each country, the enterprises have access to more or fewer financial resources. We also analyze the supply of financial resources within each system, exactly the actual money that businesses can have on those markets and key management decisions on enterprises financing. In this paper we combine the theoretical analysis with the empirical results obtained by the studies realized by European Commission. It is important to keep in mind that the results obtained by the analysis realized in the last years may be influenced by the manifestation of the global financial crisis. An important result of this analyze is that the external environment and the disturbances in the external environment have a significant influence on the financing of businesses operating in a country. This was proved again by the impact of the current financial crisis on the activities of the enterprises on each financial market from European Union.*

**Keywords:** *financing system, capital structure, incipient financial system, economy of financial intermediation, financial crisis*

**JEL Classification:** *G32, O11, P51*

## 1. Introduction

The financing system of an economy represents all economic relations, mechanisms, institutions and instruments by which the necessary financial resources in the national economy are mobilized from the agents that have available capital funds (Boariu, 2003). The financing system existing in a country plays an important role on the capital structure of an enterprise because according to the specific of each country the enterprises have access to more or fewer financial resources.

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It has been proved countless times that the operation of an enterprise without adequate capital is one of the most common causes of business failure. Besides a sufficient capital, a company must have an adequate capital structure, i.e. an optimal combination of equity and loans. A certain capital structure determines for a particular company an average cost that may decrease or increase depending on the capital structure. Therefore, choosing and obtaining an optimal capital structure is an important issue of enterprise financing.

To choose the optimal capital structure of a company there are analyzed a number of factors which decide on a certain proportion of borrowed capital and equity, and each financing decision will be made in accordance with the capital structure.

In various stages of development of the financial system, the company financing depends on the general characteristics of the environment in which the enterprise operates. Rousseau and Sylla (2003), show that countries with more sophisticated financial systems have more capital available for the enterprises and also have new ways of financing. So, through this paper we want to identify if there are significant differences between the financial structures of the firms in countries that have different financing systems.

## **2. Material and Method**

To conduct the research we will analyze on the one hand the literature in this field, initially highlighting some characteristics of how to determine a company's capital structure, and then we will expand the analysis at macroeconomic level identifying the types of existing financing schemes of the national economies. In addition to the specific literature in the field we will also analyze the study conducted by Flash Eurobarometer no. 271 regarding the firm's access to finance, where we will identify the financial structures of firms in different countries of the European Union based on the existing financing system in these countries. The study was conducted in the period between June and July 2009. This study considered 9.063 firms from the European Union, Croatia, Iceland and Norway.

The sample chosen for the study includes four types of firms: micro-enterprises (with 1 to 9 employees), Small-enterprises (with 10 to 49 employees), medium-enterprises (with 50 to 249 employees) and large enterprises (with 250 employees and more). The survey excluded companies from the following sectors of activity: agriculture, fishery, public administration, financial services, household activities and extra-territorial organizations. The survey was conducted on the basis of a questionnaire that was applied to the companies that were part of the representative sample in the mentioned period.

## **3. Results and Discussions**

In each moment, the company managers are considering a particular capital structure, considered appropriate at that moment, but over time this structure changes as a result of the following factors:

The degree of business risk: The risk is inherent in a business especially if the company uses debt. The acceptance of a certain risk degree for a business implies operation with a high level of indebtedness in that company. In the business risk, uncertainty of the operating revenues has an important place. The enterprises that have an uncertain operating income are likely to face a default, even without having

resorted to debt financing. Thus these firms must finance their activity especially with their own capital.

The influence of taxes on borrowed capital: Companies resort to borrowed capital because the interest paid is a deductible expense and the result is the reduction of the payable tax, which lowers the effective cost of debt financing. If the firm has taxable income, the financing through bond loans will reduce the tax paid by the bondholders. The borrowed capital is not attractive if the firm does not apply the interest deductibility.

The company's ability to obtain capital on reasonable terms, and because of the business flexibility: Obtaining capital on reasonable terms is extremely important, especially when the economic environment is adverse, when economic monetary policy in the economy is restrictive. So, the financial flexibility is the ability to raise capital on reasonable terms if unfavourable circumstances. The treasurer of the firm must be aware that to ensure the stability of the firm's activity it is necessary a constant supply of capital.

When the money supply in the economy is limited, or when firms face difficulties in operating activities, capital providers prefer to lend firms with a stable financial position, strong companies; the firms that do not fall into this category are having important problems in raising the necessary capital to achieve the expected capital structure. So, the future potential availability of funds and the consequences of insufficient funds have a major influence on the optimal capital structure of the firms (Bistriceanu, et. al., 2001).

Another factor exercising influence on the capital structure is the type of assets held by the firm. In the case of a state of insolvency, the cost of this state depends on the types of assets that the company has. If the share of investment in less liquid assets (tangible assets, research and development assets) is higher, the costs of the state of insolvency are higher.

In analyzing the problem of the optimal financial structure there were formulated some theories, such as the classical theory of the capital structure, Modigliani and Miller's theory and the modern theory. All these theories are analyzing the optimal financial structure in relation to the cost of the capital.

Going forward, at the macroeconomic level, we conclude that the main role of the financing system of an economy is insuring the movement of capital to meet the financing requirements of the national economy in terms of enhancer their performance (Emery, 2007).

The financing schemes of the developed countries have registered since the 1980s, important changes as a result of the reforms that have taken place in most countries. Thus, before the 70s the firms in most countries (except U.S. and U.K.) were financing through loans from banks and other specialized financial institutions. About 80% of all firms on the market appealed to financing through bank loans. The financial environment was based on a set of regulations aimed at: the control of the interest rates, quantitative restrictions on the investments of the financial institutions, financial segmentation of the activities and the specialization of financial intermediates, exchange rates and capital movement's control.

Since the 1980s there have been undertaken important reforms, following these reforms has been registered the explosive growth of capital markets, the increased competition and the increased role of financial markets in financing the national economy. In this context, there have occurred changes also in the behaviour of the enterprises regarding the investing and financing activities.

The financial innovations have led to the creation of new financial products that have allowed the diversification of investments and financing arrangements. During the 90s the main source of external financing of the enterprises has been the financial market by issuing shares, bonds and titles of the open market. On the other hand, bank loans, which previously had the highest share in the financing of the enterprises decreased significantly.

The evolution of the financing system of the economy is reflected in a diversification of the financial instruments or assets. This diversification is possible thanks to the specialized operators that ensure the creation, the storage, and the release of these assets and which most often play a key role in carrying out financial transactions, especially the transactions which give birth to these instruments (Brokman, 2007).

The analysis of the evolving process of the financial systems requires both a historical and a comparative approach. From a historical perspective we want to highlight the effective changes that have affected the financial system of each country, as outlined above. While, from the comparative perspective we are interested in the current state of the financial systems in order to highlight their common and specific characteristics.

The firms in countries with market economies can acquire their financing resources by internal financing (self-financing), through which there are provided the necessary resources for the development of the companies from their own results; and by external financing that involves the procurement of the financial resources from the exterior of the firms (loans from banks, leasing, issuance and sale of securities, etc.). An economic agent that could not cover their full costs on their own resources, by internal financing or self-financing is forced to resort to external financing.

The analysis conducted by the U.S. economists John Gurley and Edward Shaw, developed in 1960 in their paper "Money in the Theory of Finance" had as a result two ways of external financing of the economic agents. Direct financing which is characterized by the fact that the economic agents that have available cash are financing directly the economic agents that need financial resources, by buying the securities issued by those on the financial market. This type of financing is done through the capital markets and the open markets. And, indirect financing or "mediated" which is distinguished by the fact that a financial intermediary is interposed between the economic agents that need capital and the economic agents that want to place their surplus cash capital. Intermediaries through which is developed the indirect financing are represented by banks and other licensed financial entities (savings banks, insurance companies, mutual funds, investment, etc.).

Depending on the importance of the degree of intermediation in financing, we can distinguish two types of external financing schemes (Vasile, 2004): financing systems of debt economies, in which the external financing of enterprises is done mainly through loans from banking and non-banking institutions. This financing system highlights a low level of self-financing and weak development of the domestic financial market. And, the second type represented by financing system of market economies, where enterprises' financing is conducted primarily by issuing securities underwritten directly by the owners of capital and through banks.

From the comparative analysis of the financing systems of the enterprises activity in various countries we can say that there are:

- Economies of countries where the financial resources needed to business development are ensured through self-financing, due to the

reduced capacity of financial markets to mobilize financial resources. These are particularly the areas where the financial activity is still heavily dominated by the monetary operations and by the interference of central or commercial banks. Most countries in Africa and some Latin American countries have financial characteristics that enable them to assimilate to this type of financial structure;

- Economies of countries that rely on indebtedness, respective on the monetary resources purchased with loan title from credit organizations. These may be called economies of financial intermediation. They are characterized by a certain diversity of the financial assets. Besides the existence of money there are observed the appearance of various saving and credit instruments. But creating and managing these tools are mainly based on the intervention of financial intermediaries, more or less specialized;

- Economies of the countries where prevail obtaining of monetary resources through capital markets. This economies use a wide range of financial assets that are not only an institutional offer received from financial intermediaries, but also an offer of primary securities issued by non-financial companies and other entities. These characteristic features can be seen in North America, Western Europe, Japan and several countries on the Pacific Coast.

Analyzing these major types of financial structures we can draw the implications that the financial environment characteristics have on the financial management of the company. This analysis shows that each type of financial environment is delimiting the area of financial management of the enterprise, determining the objectives, its means of action and even its problems.

In an incipient financial system, the financial management, for most businesses has concerns about the knowledge of monetary regulations, and also forming and using of a self-financing as high as possible. The external financing proposed by less differentiated intermediaries it is mainly used to cover current activity needs.

In an economy of financial intermediation, the financial management is dominated by the pursuit of the relationships established between enterprises on the one hand, and banks and other credit institutions, on the other side. These reports aimed primarily settlement operations, short and medium term financing and investment operations (Neave, 2009).

In a financial market economy, the financial management is oriented towards the general knowledge of tools and capital market constraints. Even if the company does not have direct access to these markets and depends on the services offered by banks and other credit institutions, it is profoundly influenced by the continuous changing financial instruments and the variables that appear (interest rate, exchange rate) (Dragotă, et. al., 2003).

From those presented above we observe the major role played by the existing financial system in an economy in the way the businesses are financed. Also depending on the existing financial system in an economy we can talk about an increasingly wide range of financial instruments, which among others (support of settlement, placement and risk coverage operations) offers new ways of financing the business activity.

For example, in the economies with an incipient financial system there is a limited range of financial instruments issued by resident enterprises and other units. This

range includes generally the currency and other liquid savings instruments (savings accounts, term deposits). The financial assets in the form of shares, bonds, are poorly diversified, and when they exist on the market they have a limited distribution. Possession of money in the form of bank notes or current account is the dominant financial asset storage.

In the economies of financial intermediation there is enriched the range of savings and placement instruments. However, in the absence of active capital markets, financial products offered to savers and investors allow only a limited diversification. Traditional forms of fundraising promoted by credit institutions are term deposits and the lending offers are the traditional forms of short-term financing. There are credit institutions that are engaged in investment financing but they are usually specialized bodies in providing loans for the purchase of equipment in leasing. There may be universal banks that aim offering short-term loans, together with medium and long term loans.

In the market economies the financial instruments are very diverse. The applicants for capital or the operators involved on the market are engaged in a battle of strong competition to attract those who save or invest. In such a context, financial managers have ample opportunities of choice and initiative for their company. At the same time they are determined to make a more complex selection between the financial products offered, taking into account issues related to cost, efficiency, the duration and risk (Vasile, 2004).

In various stages of development of the financial system the financing of the company depends on the general characteristics of the enterprise operating environment. Thus, in an incipient financial system there are distinguished weak opportunities of external financing. The funds available on the market are reduced and the public administrations and entities require certain restrictions, to partial avoid the private entrepreneurs borrow. The companies must focus on forming and allocation of the self-financing resource which represents the only source of regular funds for most units. Yet the access of the companies to external financing provided by banks or other credit institutions, is a major concern because these resources would provide opportunities for expanding the business.

In an economy of financial intermediation the businesses financing concerns, mainly, their relations with banks and other credit institutions. The financial managers address their major financing requests to credit institutions. These are the main source of external finance, and most often the exclusive source. The financial intermediaries are primarily oriented towards short-term funding requests. But gradually they expand their scope of action to integrate also the long-term credit, especially targeted on investments. However this extension leads to crises in most countries due to a poor assessment of risks related to these term commitments (Neave, 2009). For the financial managers of companies, this development causes a net change of their funding solutions. First, they addressed to banks to finance short term operations, but they must cover their needs for equipment purchase or cash flow from their own resources. In a second step, the diversification of credit offers from the financial intermediaries allows to the firms to negotiate with them the short-term loans, but also the medium and long term ones.

Capital market in these economies plays a secondary role in the mobilization and allocation of necessary funds. Only the most important firms may eventually resort to issue of shares, bonds or short term titles.

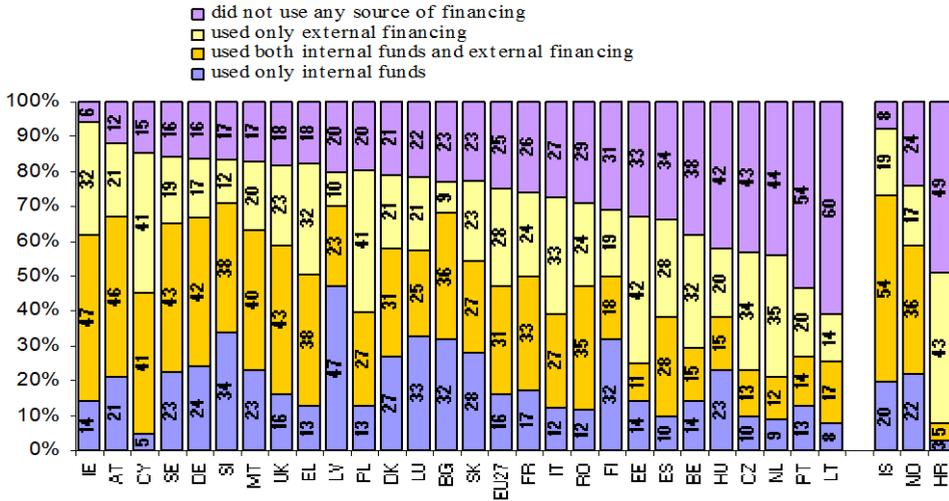
Financial market economies allow business managers to seek funding , placement or hedging solutions which ensures an appropriate response to business needs at the best cost (for financial instruments and hedging), or at the best yield (for the investment instruments). This expansion of choice is due to market development and financial institutions but also to the multiplication of the financial instruments addressing different needs. However, the financial market economies expose the managers of the firms to new financial difficulties. On the one hand, the financial markets suffer from instability phenomena affecting the interest rates, the exchange rates and the financial asset values. The instability of these variables can lead to severe losses and serious disruptions to the financial management of enterprises, being the cause of a worsening of the financial risk. On the other hand, these economies are exercising more severe financial constraint for the enterprises. With wider access to the financing opportunities in capital markets, they are the subject to continual pressure from the purchasers of securities (shares, bonds), which are bringing their contribution to the enterprise resources and because of that are monitoring the progress of the enterprises performance and risk.

After we have analyzed the main types of existing financial systems and business financing arrangements as part of each system, we will highlight below some empiric results obtained by the Flash Eurobarometer to reinforce the results previously obtained by theoretical analysis. More precisely through these empirical analysis we want to identify the financial structure considered optimal by the firms in the member countries of the European Union and see if there are significant differences from one country to another. Especially, given that in the Western countries dominate the financial market economies with developed capital markets, but there are also countries, such as Romania, which have an economy of financial intermediation. So, from the study we observe that a percent of 31 companies which exist on the markets from the European Union countries have used a combination of own funds and external funds to finance their activity. Also, 28% of the analyzed companies used only the external financing in the analyzed period, while 16% of the companies used only the internal funds. Also one quarter of the managers interviewed said they had not used any financing source in the period under review.

The companies from different countries have different financing structures. The optimal financial structure of the enterprise must establish a relationship between debt and equity financing so that financing costs to be as low as they can. This depends on the objectives of growth of the company and on the expected return and the risk level that the company agrees to assume.

Figure 1 presented below shows that the companies in Croatia have used a combination of internal funds and external sources of funding in the lowest proportion in the analyzed period (5%). The enterprises in Lithuania (60%) and Portugal (54%) were the most that have not used any source of funding in the period under review while the fewest enterprises that have not used any source of funding have been met in Iceland (8%) and Ireland (6%). The proportion of respondents who said that their company has used only internal funds in the last six months, ranged from 3% (in Croatia) to 4% (in Cyprus) to 47% in Latvia. In Finland, Bulgaria, Luxembourg and Slovenia, almost one third (32% -34%) of the analyzed companies have used only internal funds. The companies from Croatia and Cyprus were not only among those who did not use internal funds but also among those who used only external financing during the analyzed period (43% and 41%), similar to the situation in Poland and Estonia (41% and 42%).

The companies in Bulgaria, Latvia and Slovenia have used in the lowest proportion only the external financing (with a proportion between 9% and 12%). In Romania we see that 12% of the companies have used only their own funds, 35% have used both internal funds and external financing, and only 24% have used only external financing.



**Figure 1** The financial structure of the enterprises in the European Union, Croatia, Iceland and Norway (using internal and external financing - in%)  
 Source: Flash EuroBarometer, 2009, p. 29

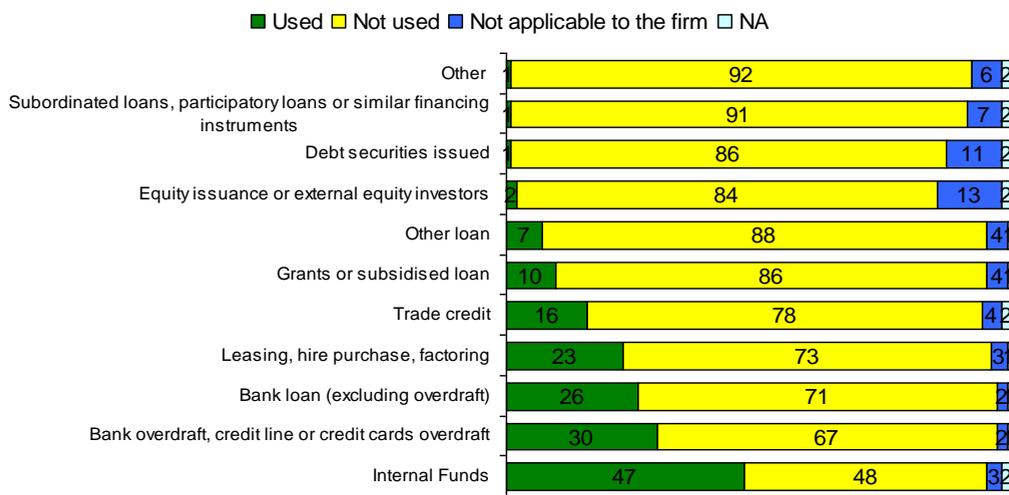
Almost half (47%) of managers in the EU have said that they have used internal funds in the period under review, to finance their operations (as seen from above - some have used only internal funds, while others have used these funds in combination with external financing). In addition to internal funds the companies have also used external sources for financing their operations, totally 58% of companies have used at least one external source of debt financing in the last six months. The most popular source of financing was the bank loans: 30% of the enterprises used bank overdraft facility or line of credit and 26% had received a bank loan. This can be explained by the fact that in the most analyzed countries we have an economy of financial intermediation, where the banks are the main financial intermediaries.

Business debts may also be covered from public resources or resources from a friend or family member: 10% of respondents mentioned that they applied to grants or subsidized bank loans and 7% mentioned "other sources".

Approximately one quarter (23%) of respondents said that leasing, factoring, hire purchase were one of the source of financing used and 16% said they had used trade credit as a source of short term financing. Very few enterprises (1%) have issued debt securities during the period under review, but 11% of managers have found this type of financing as irrelevant to them. The issuance of securities or foreign investment capital was mentioned by 2% of managers as one of the sources of external financing that was used during the research period. More than one-tenth

(13%) of managers have found this type of financing relevant when they were asked to explain the financial structure of their business.

The types of financing sources used by enterprises in the period under review are presented in detail in the figure 2 observed below:



**Figure 2** Using internal and external sources of funding by European Union companies in the analyzed period

Source: Flash EuroBarometer, 2009, p. 30

When we interpret these results we have to be aware by the fact that the study was realized in a period when the current financial crisis is manifested all over the world. So, these sources of financing preferred by the firms may not be the same in a normal period when uncertainty and risk are lower on the markets.

### 3. Conclusions

The financing decision of an economic agent involves choosing the most effective combination of financing sources for the businesses from all existing financing sources. As an Irish proverb says "It is a fool the one who does not take the money that is offered to him." The financing decision of an enterprise implies the most efficient use by the company of the money which is provided, of the funds offered by various financial or non-financial institutions.

Through this study we have presented the existing types of financing of the economy schemes, but also how the companies operate in these systems. We have analyzed the supply of financial resources within each system, exactly the actual money that businesses can have on those markets and key management decisions on enterprises financing.

Analyzing the data obtained by survey conducted by Flash Eurobarometer we have noticed that most businesses prefer financial resources that came from the banks. Banking institutions are considered the main intermediaries in both debt economies and in the capital market-based economies. In the European Union countries we can not speak of the third type of economy, incipient financial economy, because even the developing countries have already implemented an economic system based on

debt financing. Also, note that even in the most developed economies, where the capital markets play an important role and we can talk about a variety of financial instruments, the companies still use the resource provided by banks, because only a small part of the enterprises have access to capital markets and innovative financial instruments.

The most important conclusion that emerges from this paper relates to that: the financing system of the national economy plays an important role on determining the optimal capital structure of the firms. This is evidenced by the fact that the external environment and the disturbances in the external environment have a significant influence on the financing of businesses. This was proved again by the current financial crisis impact on the activities of the enterprises on the market.

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## INFORMATION SCENARIOS OVER THE RISK IN INSURANCE

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**Abstract:** *Risks management means identifying them, assessing, quantifying and strategy to counter them, and finding solutions to some levers to diminish or even eliminate the possibility of developing or their consequences. Hung everywhere, risk is associated with uncertain situations and opportunities. The consequences of risk can result in adverse or positive effects related to the activity of the insurance undertaking or of the reinsurance undertaking. The risk has a pronounced randomly character, and its presence in the field of insurance undertakings and reinsurance. This can be explained by the fact that the risks are taken by these companies and have direct effects on their financial results during the period of validity of the contractual relations. The results of risk effects have an impact on the results of activity of insurance companies. The financial impact of a negative event, exceed the sum of the individual loss, leading in some cases to bankruptcy. The financial impact is due to the positive opportunities, which have not made an appearance, and the first event to transform into income. An important role is the responsibility of the information system, providing solutions based on scenarios, by electronic data processing, consider all types of consequences of a hazard and allow insurance companies and reinsurance, on the other hand, to calculate all the possible consequences of a given event and the ultimate financial impact on them, and finally, to make decisions to base decisions for various insurance products and reinsurance. People insurance records for each situation. In practice the scenario method is only used to make specific estimates for different scenarios depending on the circumstances, which has a certain probability of realization, for the favorable; for the neutral and negative and gives solutions for each individual, taking into account certain criteria. For example, we will present a life insurance in several poses.*

**Keywords:** *risk; general risk; country risk; contractual risks; default risk.*

**JEL classification:** *G22.*

### 1. INTRODUCTION

Insurance and reinsurance companies are operating in all mandatory and optional insurance and pursue profit and loss relief.

The aim of the insurance and reinsurance companies, is par excellence, human and physical risk taking in exchange for receipt of premiums from policyholders and respectively to reassure and when the event occurs unwanted material or human, the insurance company, proceed according to the contract, to pay damages the insured amounts.

The risk is hanging everywhere and is associated not only uncertain situations and opportunities.

The consequences of risk may materialize, either negative or positive effects related activities of the insurance company or reinsurance company.

As a result, the risk is highly random, but a greater proportion made its presence in the insurance and reinsurance companies, because the risks are taken by these companies through insurance contracts and reinsurance contracts when they arise, have direct effects on their financial results only within the validity period of the contractual relationship with the insured, individuals and corporates.

The results of risk effects, positive or negative, impact on the output of insurance and reinsurance companies.

The negative financial impact of an event can exceed the amount of individual losses, leading in some cases to the bankruptcy of insurance and reinsurance companies.

The positive financial impact of an event is due to favorable opportunities, situations where during the validity of the insurance or reinsurance undertaking has not made an appearance event.

Into the activities of insurance and reinsurance companies, "an important role is played by the information system, which is based on electronic data processing takes into account, on the one hand, all the consequences of a hazard and allow insurance companies and companies reinsurance, on the other hand, to calculate all the possible consequences of a given event and the final financial impact on the insurance or reinsurance companies, make decisions, and to base decisions for various insurance and reinsurance products. "Companies need to have relevant information at the appropriate time. Information becomes available thanks to technology arising from Web.

## **2. EXPOSURES TO THE RISK**

For insurance and reinsurance companies is not enough just to identify risks.

A group is important and prioritize risks according to their influence on the insurance and reinsurance companies.

This risk group according to their importance enable insurance and reinsurance companies:

- to make a forecast risks in insurance and reinsurance companies,
- to identify solutions to quantify the impact of risk on them,
- to apply solutions to measure the risk
- to apply the measurement risk solutions to the identified risks
- to find solutions that may reduce the risk of the impact
- to find internal solutions that could reduce the risk of uncertainty on insurance and reinsurance companies
- identification and determination of the direct costs of damage, occurred from the phenomenon
  
- identification and determination of indirect costs of damage, as an occurrence of the undesirable phenomenon
- to provide financial resources for monitoring and forecasting risk financing
- to provide financial resources for control and risk financing.

In practice, risk estimation accuracy depends on:

- the amount of information available to the risk manager
- the quality of information available to the risk manager
- the methods;

- the statistical techniques that can be used
- the ability risk manager
- the subjectivity manager
- the risk control programs
- the risk retention programs
- taking into account all the possible consequences in case of a given event;
- the final impact on the occurrence of a given event the insurance company
- the risk control techniques
- the risk financing techniques.

The risk estimation is based on the design of methods for measuring the importance of risk for insurance companies and their application for the identified risks.

Literature presents two main risk categories: pure risks and speculative risks.

The pure risks are defined as risks that implies a probability of loss unaccompanied by any chance of winning.

The speculative risks are defined as risks that can result from either a loss or a gain. The financial impact of the negative consequences of risk, leading to strong adverse effects on financial planning insurance company, sometimes difficult to absorb and may in some cases lead to bankruptcy.

The exposure characteristics are: the risk frequency is called also the probability of the event in a time and known risk severity consequences.

Exposure characteristics can be measured, knowing facts and information about these risks.

Literature and empirical research make some clarifications in this sense that:

- in the case of pure risk: loss frequency or number of losses in a given period and the size of losses.
- In speculative risks: the frequency of positive and negative outputs and the size of these outputs.

If the risk manager has a huge number of information, we use risk assessment techniques based on the calculus of probability and statistics. To estimate the severity of the exposure, in practice and in the literature are used two concepts:

- maximum possible damage
- probable maximum damage.

Maximum possible damage is the maximum total amount of damage that can occur in a particular place on a particular good and can be estimated even in the absence of adverse event, as a result, is used as limit value.

Maximum damage is the value of the damage they consider the risk manager and will not exceed the maximum possible damage.

In the event that there is insufficient information and data for statistical techniques may be used in less rigorous methods based on the use of a probability scale expression.

By Elaine M. Hall's theory, the probability scale is as follows:

- Very unlikely, in the situation where the probability of the event is below 10%, is less likely, that the event does not occur over the life of the subject of insurance;
- Unlikely, is when the probability of the event is between 10% and 40%, is barely possible that the event does not occur over the life of the subject of insurance,
- Is probably where the probability of occurrence is between 40% and 80%; it is possible that the event occur over the life of the subject of insurance;

- Most likely is the situation where the probability of the event of 80%, it is likely that the event will occur over the life of the subject of insurance.

In practice for risk diagnosis is used:

- The risk matrix
- The risk map.

The risk matrix shows four risk categories as follows:

- Class I represents risks with low frequency and low severity
- Class II are risks with low frequency and high severity,
- Class III are risks with high frequency, low severity
- Class IV represents risks high frequency, high severity category respectively risks with low frequency and low severity, the use technical risk retention.

For class II, respectively risks with low frequency and high severity should be provided.

For class III, respectively risks with high frequency, low severity are recommended control techniques, to be combined with restraint.

For class IV, respectively risks with high frequency, high severity are recommended control techniques, to be combined with restraint.

Risk Map is a tool for diagnosis and risk analysis in business insurance and reinsurance companies.

The achievement of such maps requires:

- To identify risks relating to insurance companies:
- The best estimation of the probability of each event
- The best estimation of losses resulted from each event
- The best estimation of the probability of the events with high probability of occurrence but with little impact on the insurance company
- The combined use of techniques of control and risk financing;
- The control techniques to prevent risks;
- The creation and retention of techniques risk
- The calculation taking into account all the possible consequences if the event
- The calculation taking into account the final impact on the insurance companies for the event.

"The identification and the risk assessment should be made on several levels. First on the overall level of their insurance company and then at all levels of organizational structures. "

" The reinsurance acts only by means of ensuring that allows reducing the share of risks exceeding the possibility of inclusion of insurers, reducing liability insurance business." Because: "reinsurance is a complement to the business of insurance and the receipt path failure risk."

### **3. THE SCENARIO METHOD**

Over time, large volume of personal insurance operations, and data processing and information required computerization of their individual so to be managed separately and the funds and the final results to be highlighted separately from other categories and types of insurance. The security of a person records the status of each insured. Based on these records is known amount of earned premiums to a point, any amounts redeemed, reduced insurance company loans, etc..

In practice, the scenario method is only used to make point estimates. for different scenarios depending on the situation, which has a certain probability of realization,

the state of positive, neutral and to the unfavorable and gives solutions for each individual subject to certain criteria.

These criteria will follow:

- The market size
- The turnover size;
- The unit selling price;
- The turnover;
- The variable operating costs
- The operating variable costs for exploitation;
- The size of the fixed costs of financial
- The brut profit
- The taxes;
- The net profit.

For example, we will present a life insurance for the same person in three phases.

Option 1. Life insurance for 20 years with capitalization.

Estimated solution for Valentin Popescu:

- Date of birth 20.05.1980
- Married with two children,
- Engineer
- Medical history - no
- Risk of occupational disease - no,

Life insurance capitalization benefits:

- guaranteed technical interest of 3.5% per year for the duration of the contract,
- At the end of the profit is shared with customers at the rate of 85%
- Since the third year, the police can be buy
- in case of illness and hospitalization each, day of hospitalization, from the third day, it compensates £ 150 per day.
- If surgical intervention he is payed, as it is also the convalescence, from the third day after the surgical intervation.

Option 2: Life insurance for 20 years with capitalization and no protection. Estimative solution for Valentin Popescu:

- Date of birth 20.05.1980;
- Married with two children;
- Engineer;
- Medical history – not;
- Risk of occupational disease – no.

Annual prima 1200 lei, 100 lei premium per month.

Does the sum assured in case of natural death of 24,000 lei. In case of accidental death £ 48,000. In case of total disability due to accident 72,000.

Variant III. Life Insurance for 20 years with protective caps. Estimated solution for Valentin Popescu:

- Date of birth 20.05.1980;
- Married with two children;
- Engineer 4. medical history – not;
- Risk of occupational disease - no,

First Annual: 1.200 lei, 100 lei monthly premium\.

At the end of the insurance contract, if the insured does not receive guaranteed interest and special reserve. The first month is 100 lei per month, the annual

premium is £ 1,200, of which £ 800 goes on capitalization per year and £ 400 for protection. Protection money if not used by the insured in a year are lost. Protection in case of illness and surgery £ 4,800 per year, and the sum insured is £ 19,200. Therefore, using the scenarios method, the insurance company representative shall simulation provided several potential solutions and estimating the probability of risk, life insurance benefits estimated for each scenario and its impact on insurance and reinsurance company.

#### **4. CONCLUSIONS**

The simulation, as well as risk analysis technique is used to study the behavior of random variables and variables depending on the performance will be decided by the acceptance or rejection.

This technique involves the automatic generation risk analysis, computer, a large number of values of input variables of the system, after previously held:

- Identifying input variables
- Identify random variables
- Identify output variables,

Based on the electronic prelucration, it can be achieved:

- The analysis of simulation results,
- The interpretation of simulation results
- The decision to accept or reject the decision.

Using electronic engineering, risk analysis includes:

- identifying sources of risk;
- Reducing uncertainty
- subject to a decision maker risk that would endanger the viability of the company
- decision to accept or reject the conclusion of insurance;
- construction of future scenarios, plans and projections
- estimating the probability of each scenario
- identify risks relating to insurance companies;
- best estimate of the probability of each event;
- accurately estimate the likelihood of various consequences;
- assessment of the possible consequences of the decision;
- decision helps the decision maker to compare alternatives in terms of the degree of risk and choose the most attractive of them;
- decide whether the risk is acceptable or not.

"If the insurance people know some data about each family regarding the profession (job), work, number of those who have incomes, their age etc, is very helpful in dealing with the activity of the end insurance because according to these elements can indicate the insurance product that best suits the particular situation of each person in that family".

The information system by processing data and information through specialized simulation software, makes it possible to multiple solutions to the same problem for finding the final optimal solution.

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***SUB-SECTION: BANKING***



## ROMANIAN BANKS LIQUIDITY MANAGEMENT

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**Abstract.** *During the early “liquidity phase” of the financial crisis that began in 2007, many banks – despite adequate capital levels – still experienced difficulties because they did not manage their liquidity in a prudent manner. The crisis drove home the importance of liquidity to the proper functioning of financial markets and the banking sector. Prior to the crisis, asset markets were buoyant and funding was readily available at low cost. The rapid reversal in market conditions illustrated how quickly liquidity can evaporate, and that illiquidity can last for an extended period of time. The banking system came under severe stress, which necessitated central bank action to support both the functioning of money markets and, in some cases, individual institutions. Most transactions or financial commitments have implications for a bank liquidity. Transactions are particularly vulnerable to liquidity problems at a specific institution. Therefore, one can deduce the importance of the correct calculation and liquidity indicator, not only for the bank concerned, but especially for NBR uses that bank risk management tool. That is why the authors took into consideration a sample of banks in Romania to show to what extent the banking crisis has influenced the development banks. The objective of this paper is to provide a global perspective of the liquidity risk from a banking societies’ viewpoint. Our paper belongs to the technical studies that analyze the concrete way in measuring the liquidity risk at the level of the banking societies from Romania. The study is structured on chapters that present the theoretical background in liquidity risk management, also, the paper contains a study cases part, which presents the actual stage and the challenges of the measuring the liquidity risk. The difficulties experienced by banks were due to lapses in basic principles of liquidity risk management. In response, as the foundation of its liquidity framework, the Basel Committee in 2008 published Principles for Sound Liquidity Risk Management and Supervision (“Sound Principles”).*

**Keywords:** *liquidity, risk assets, volatile equity*

**JEL classification:** G21

## **1. Generally Introduction**

Banks need liquidity to offset expected and unexpected balance sheet fluctuations and to provide the necessary funds for development. Liquidity is the ability of banks to effectively deal with the withdrawal of deposits and other debts due and to cover additional borrowing, loan and investment portfolio. A bank has adequate liquidity potential when it is able to obtain the necessary funds (by increasing debt, securitization and sale of assets) immediately and at a reasonable cost. Price liquidity depends on market conditions and the market perception of the level of risk of the debtor institution.

Other distinguished professors believe that banks need liquidity of each bank depends on the situation expressed sheet.

To assess the state of liquidity, particular importance is how to classify bank assets and liabilities.

One of the most prestigious institution which supervisory banking risks - Bank for International Settlements (BIS) - issued by the Committee of the Basel Banking Supervision (the Committee) a set of principles that should underpin bank liquidity management organizations.

Liquidity risk is the probability that the bank will not be able to meet payments to customers due to diverting the proportion of long-term loans and short term loans and bank liabilities Gap structure.

Liquidity risk is considered a major risk, but it is subject to meanings such as extreme liquidity, "safety cushion" or the ability to raise capital at a normal cost.

Extreme liquidity situation involves the failure of banks and manifested by massive withdrawals of funds or credit lines customary closing other institutions, which generates a brutal liquidity crisis.

Liquidity risk refers to the situation where not seem sufficient liquid assets available to meet unexpected needs. In this case, liquidity is rather a "safety cushion" to deal with difficulties.

Also, liquidity risk expresses the event of difficulties, temporary or important to have access to sources of funding to meet the needs. In this case, liquidity shows bank's ability to raise capital at a "reasonable cost" at all times. This ability depends on two factors disjunction: market liquidity and liquidity institution. Market liquidity directly affects the ability to increase the capital of banks. Liquidity of banks is characterized by developments projected financing needs.

Liquidity risk management involves anticipating needs liquid amount to the bank, in conjunction with providing the necessary resources to meet these needs. But maintenance is costly investments in liquid form for the bank and for this reason it is necessary to achieve a more accurate cash flow.

## **2. Analysis method and resulting liquidity in banks**

Bank liquidity problems overlap covering the minimum reserve requirements used by the central bank to conduct monetary policy in light of economic developments conjecture. Thus, we considered a sample of banks in Romania to highlight the state of liquidity and liquidity risk during this period.

### **2.1. Bank liquidity analysis using financial ratios**

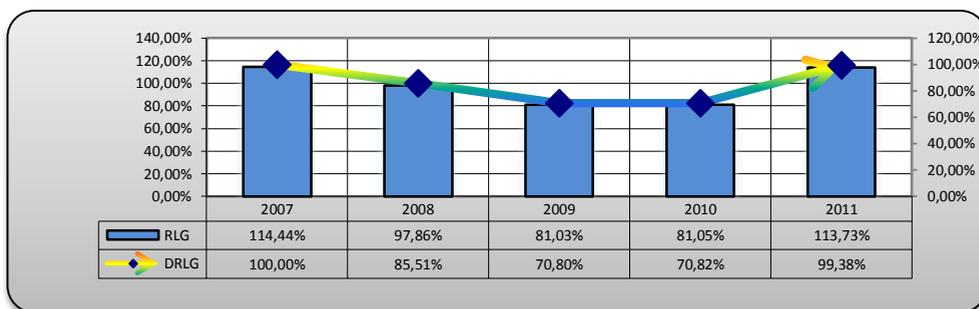
Banking system liquidity indicators, provided for central bank rules and calculated for Romanian banks are: overall liquidity, immediate liquidity, ratio of own funds and

resources permanent deposit coverage ratio, ratio of liquid assets; rate volatile assets, liquidity indicator.

*Ratio of liquid assets (RLG)* reflect the available capacity (deposits with the central bank, cash and cash equivalents, deposits with banks and other assets - AL) of the bank to cover its current liabilities (resources attracted in sight - DCR). General liquidity takes the form of general liquidity ratio as follows:

$$RLG = AL/DCR$$

It is estimated that the bank has a favorable liquidity when liquidity ratio is between 2 and 2.5. In the opinion of other specialists general liquidity ratio should be above 1.5. In the literature Anglo-American view that general liquidity ratio must be at least.



**Figure 1:** General liquidity ratio evolution in Romanian banks  
Source: The banks' own financial statements

In the analyzed banks of the indicator value analysis shows that overall, liquidity ratio recorded during the entire period analyzed values are below the threshold of 1.5. The highest value of liquidity occurred in the years 2007 and 2011 (1.14 and 1.13), but still well below the limit of 1.5. General liquidity developments over the reporting period is unfavorable, so that in the years 2009 and 2010 to reach a level of 81% of the indicator (0.81). In 2011 the situation improved reaching up to 1.13, but in these conditions, the indicator remains below 1.5.

*Immediate liquidity (RLE)* measures the degree to which liquid assets covering payments due in the short term. Immediate liquidity is calculated as a percentage ratio between liquid assets (cash, current account with the central bank and other central banks, short-term investments-TR) and accounts payable (at sight of customers, short-term loans-DCR), that:

$$RLE = TR / DCR$$



**Figure 2:** Immediate liquidity ratio evolution in Romania banks

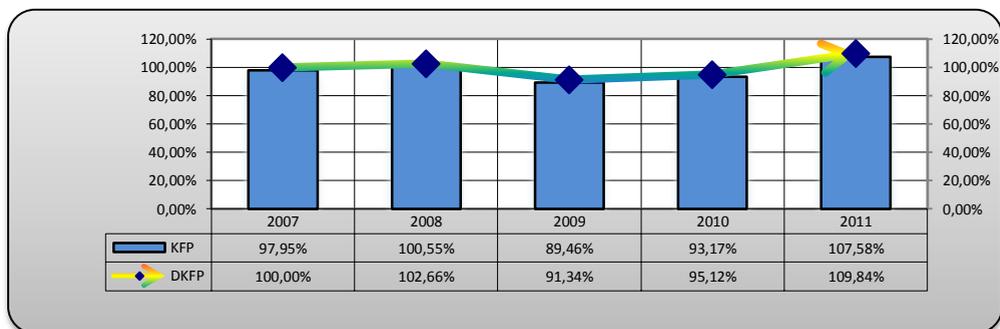
Source: The banks' own financial statements

Liquidity is favorable if it approaches 100%. According to other experts, the optimal level of the indicator is 20%, but financial security is still range between 50% and 100%.

As you can see immediate liquidity in case analyzed banks is maintained with continued entire period analyzed (2007-2011), the range safety. Although immediate liquidity following a downward trend, it remains at a good level. The highest value was recorded in 2007 (91.67%), and then decrease to 61.64% in 2009. From 2007 it began to grow, reaching in 2011 to record the value de73.03%.

*Ratio of own funds and permanent resources (KFP)* is determined as a percentage ratio between long-term bank resources (FTL) and Mon-term assets (ATL):

$$KFP = FTL / ATL * 100$$



**Figure 3:** Ratio of own funds and permanent resources evolution in Romania banks

Source: The banks' own financial statements

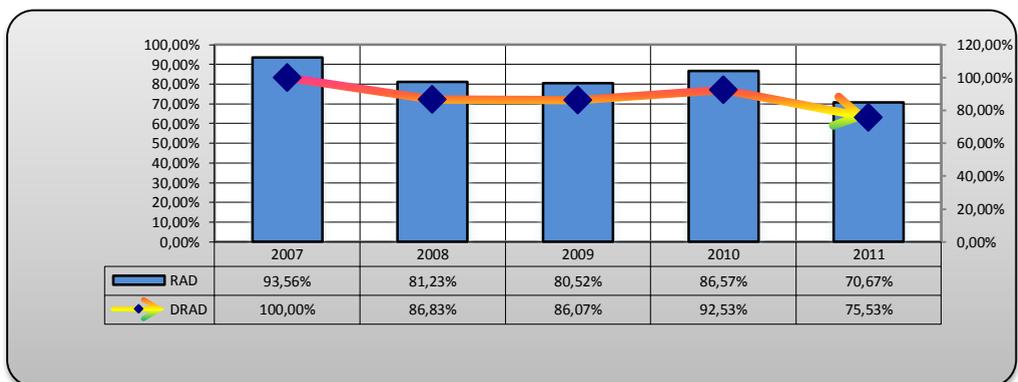
Minimum ratio between long-term bank resources and long-term assets should be at 60%. Analyzing the values of this indicator can be seen that this value is above 60% throughout the period analyzed. The lowest value was recorded in 2008 (89.48%) and the highest was recorded in 2011 (107.56%). Regarding its evolution we see that the trend is sensitive constant DRB Significant indicator values do not fluctuate so in 2008 compared to 2007 it grew by only 3% in 2009 and then decrease

to the value of 89.46% and increase continued until 2010 when record value of 107.58%.

*Deposit coverage ratio (RAD)* is calculated as a ratio of total loans (CRA) and total deposits from customers (DA):

$$RAD = CRA / DA$$

The unit value of this ratio expresses a normal situation. A low rate and would be a nil excess liquidity and reduced profits. An over-unit rate would involve increased risks causing loss liquidation of assets, the need to cover the reimbursement of depositors.



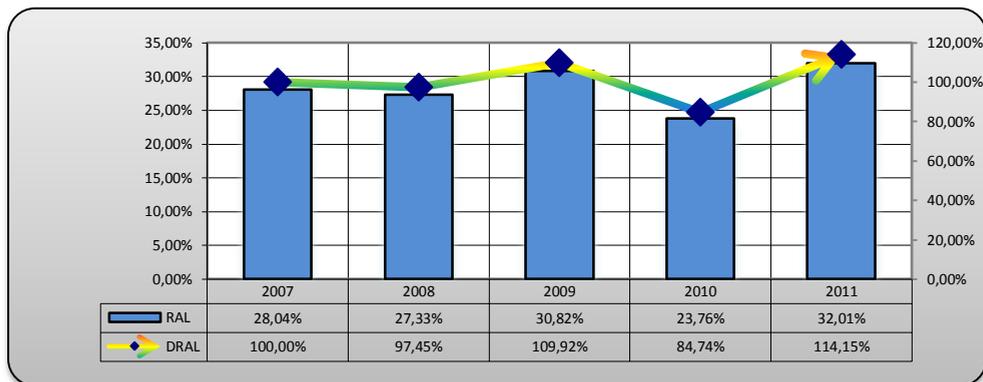
**Figure 4:** Deposit coverage ratio evolution in Romania banks  
Source: The banks' own financial statements

It can be seen that during the period analyzed indicator is below 1, which means that there was an excess of liquidity that means the volume of loans was less than the deposits. The fact that this report is one subunit shows that profit was diminished by the fact that, while in the case of bank loans has benefited from interest and fees related, in terms of bank deposits has to pay depositors interest on deposits. The highest value was recorded in 2007, when its value reached 93.56% and the lowest in 2009 when the indicator equaled 80.52%. Trend during the period under review, overall, is a descendent from 93.56% in 2007 and reached 70.67% in 2011.

*Ratio of liquid assets (RAL)* Ratio of liquid assets (RAL) is determined as the ratio of unemployed availability and marketable securities on the one hand (AL) and total bank assets (TA), ie:

$$RAL = AL / TA$$

This rate illustrates the dimensional size of liquid assets and liquid easily. An over-unit rate is favorable.



**Figure 5:** Ratio of liquid assets evolution in Romanian banks  
Source: The banks' own financial statements

As you can see the indicator values are well below the considered normal. During the analyzed period the indicator value is somewhere at an average of 25%. Trend during the period considered is oscillating, so that the indicator is rising until 2009, followed by a decrease in 2010 and increase in 2011. The lowest value recorded in 2010, and the highest value that has indicator is 2011.

*The share of liquid assets in total volatile resources (RRV) is determined as a ratio of volatile resources (RV) and liquid assets (LA), ie:*

$$RRV = RV / LA$$

Volatile resources include deposits and other resources, which by their nature are short lived or downward changes unexpectedly and untimely. By natural or resources involves employing volatile liquidity. A nil rate is beneficial for bank management.



**Figure 6:** The share of liquid assets in total volatile resources evolution in Romanian Banks

Source: The banks' own financial statements

If the indicator analyzed banks are at a normal value only in 2007 (96.95%) and 2009 (88.47%). In the remainder of the indicator value is above that considered normal when reaching the maximum in 2009 stands at 122.04%. As you can see the indicator increases until 2009, and then to follow a downward trend until 2011.

*Liquidity indicator (RLI)* is calculated as the ratio between actual liquidity (LE) and liquidity necessary (LN):

$$RLI = LE / LN$$

Actual liquidity is determined by summing, for each band, balance sheet assets and liabilities received and shown off balance. Necessary liquidity is determined by summing, for each band, the obligations and commitments data sheet and off-balance sheet highlighted.

Bands commitments received and given commitments are as follows: Under one month; between one and three months Three to six months Six to twelve months. NBR rules provide that if a record surplus of liquidity in any of the bands maturity above, except for the last lane, it will add to the actual liquidity for the next maturity band.

Necessary liquidity destinations are: Setting reserve requirements, loan customer requests, customer requests for withdrawal of funds; Making interbank settlements, payment of other obligations of the bank (payment of dividends, taxes and so on). The main sources of liquidity (effective) are: Cash, Cash, demand deposits with the central bank or correspondent banks, Deposits, Loans from other banks or from the central bank.



**Figure 7:** Liquidity indicator evolution in Romanian banks

Source: The banks' own financial statements

Trend indicator, as can be seen from the chart above, is downward throughout the period analyzed. The only year in which there was excess liquidity was in 2007, when the indicator stood around 1.03, while the remainder of the indicator was positioned

below 1, indicating a lack of liquidity. The lowest value was recorded in 2010 (0.81), the maintaining and 2011.

## 2.2. General liquidity analysis using Eviews program

With EViews program we analyzed the relationship between general liquidity and volume current liabilities and liquid assets available for the period 2007-2011, the banks analyzed. The use EViews program we obtained the following result:

Dependent Variable: R\_GENERAL\_LIQUIDITY

Method: Least Squares

Date: 06/12/12 Time: 16:27

Sample: 2007 2011

Included observations: 5

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.091043	0.055651	19.60515	0.0026
Current_debts	-2.08E-10	2.68E-11	-7.751538	0.0162
Liquid_assets_available	1.90E-10	2.60E-11	7.298575	0.0183

R-squared	0.968132	Mean dependent var	0.976220
Adjusted R-squared	0.936264	S.D. dependent var	0.165249
S.E. of regression	0.041719	Akaike info criterion	-3.232025
Sum squared resid	0.003481	Schwarz criterion	-3.466362
Log likelihood	11.08006	F-statistic	30.37966
Durbin-Watson stat	2.609296	Prob(F-statistic)	0.031868

Source: The banks' own financial statements

It is noted that the t-test probability is below 5% In this case, the probability is less than relevant to that work, the null hypothesis is rejected and the coefficient is considered statistically significant. As a result, we can say that the evolution of general liquidity is influenced by the amount of current liabilities and liquid assets available.

Through F test is intended to measure the independent variables explain the dependent variable evolution. F test of the null hypothesis is that all regression coefficients are null. Whichever probabilities are two possibilities:

- "P" is the lower level of relevance in this case the null hypothesis is rejected, ie at least one of the regression coefficients is DRB Significant;
- "p" is superior levels of relevance, then the null hypothesis is accepted, that all the regression coefficients are significant.

F test results indicate a probability that is less than relevance (0.031) so that the null hypothesis is rejected, which means that at least one of the coefficients is significant. R<sup>2</sup> indicator, shows if new estimated regression is well specified. A regression is well specified if the value of this indicator is as near 1. If regression of overall liquidity, debt and liquid assets available, the value of this ratio is quite close to the value 1, so we can say that regression is well estimated. In other words, 96% of the total variance is due to the general liquidity available liquid assets and current liabilities. Wats Durbin statistic (DW) testing serial correlation of errors. If the value of DW is situated around 2, the errors are not correlated. Regarding the case treated me, the

value of DW stands at around 2, there is likelihood that errors are correlated to some extent.

### 3. Conclusions

Because banking risks are a source of extraordinary expenses, their proper management for revenue stabilization time acts as a shock absorber. If the bank risk management and overall management system is effective, then the bank will be successful. It is important for a bank to manage risks, as this enables them to predict to some extent the event risk and take the time necessary decisions to reduce the risk of potential adverse consequences.

Risk is considered to be one of the organic components of bank affairs. In the current economic environment, it is increasingly felt increasing banking competition, it is noted challenges faced by institutions in this field in the approach to business with a higher risk, but generates a substantial income. Some bankers may accept risk (including expected losses) as long as they can identify and manage uncertainty (unexpected loss). In terms of dynamic and volatile markets, the difference between the two types of losses fade, if not disappear.

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# IS ADEQUATE THE METHOD OF LOAN LOSS PROVISIONING? – EVIDENCE FROM ROMANIA

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**Abstract:** *The importance of banking system within the financial system requires a special attention in order to secure its stability. Thus, with the occurrence of the financial crisis, in the context of integration of the financial system and creation of unique financial market, became more stringent the need for the existence of specific tools to prevent financial crises and to guarantee the continuity of normal economic activity. In this category are the macro-prudential supervision tools whose role is to reduce the ability of banks to damage the economy by taking on excess risk. Among them is registered the dynamic provisions intended to be used for enhancing bank soundness and to help mitigate part of the pro-cyclicality of the banking system. The current study addresses the methodology for establishing specific provisions for credit risk at the level of the Romanian banking system, highlighting the direct implications over the credit institutions, and indirect implications over the economy as a whole. The study presents as well the possible course of actions in order to remedy the weaknesses in the recognition of loan losses. Thus, while listing the specialty literature, study presents the regulatory framework applicable to loan loss provisioning, underlining the weaknesses of the static provisioning model and the need to look forward to the dynamic model along with the accounting methodology. In this regard it was considered the worsening of a loan portfolio in macroeconomic context and a hypothetical comparative study between the static and dynamic model has been realized. The results of the study revealed that the current provisioning model has a procycle character without considering the influence of macroeconomic factors over the future worsening of the loan portfolio without allowing recognition of future loan losses due to failure to identify future risks generating events and their credible assessment. Therefore it is required the need to establish reserves during the economic growth periods to cover losses from loans in order to prevent disruption of the banking activity and to limit the risk of insolvency. To achieve this goal it is necessary that all the parties involved, namely the banks, the regulatory authority and accounting organizations, to realize the importance of loan loss provisioning and act accordingly.*

**Keywords:** *loan loss provisioning, static provisioning, dynamic provisioning, macro-prudential tool, procyclicality*

**JEL classification:** G21, G28

## 1. Introduction

The occurrence and manifestation of financial crisis has surprised unprepared the banking system generating negative effects on the stability of the entire financial system and the economy as a whole. One of the weaknesses was the lack of capital and liquidity reserves to be used during the decline phase of the economic cycle in order to limit its negative effects. To prevent and reduce the negative effects of financial crises, respectively to limit losses, liquidity constraints and possibly a credit

crunch, the Basel Committee on Banking Supervision (BCBS) is promoting stronger provisioning practices and establish the set-up of capital buffers and liquidity resources by the credit institutions (BCBS, Basel III: a global Regulatory Framework for Banks and banking systems more resilient, 2011). The capital reserves refers to a capital conservation buffer of 2.5%, comprised of Common Equity Tier 1, is established above the regulatory minimum capital requirement, and a countercyclical capital buffer designed for the periods when excessive credit growth is associated with construction of the systemic risk (Borio, Furfine and Lowe, 2001). As regards the liquidity risk the Committee developed the Liquidity Coverage Ratio in order to provide liquidity for at least one month and the Net Stable Funding Ratio for a time horizon of one year.

The purpose of this article is to analyse in the Romanian banking system, the necessity for application of the dynamic provisioning method for the credit losses, highlighting potential factors influencing the credit risk.

The remaining of the paper is organized as follows. Section 2 deals with Regulatory framework applicable to provisioning for loan losses. Section 3 deals with deterioration of loan portfolio in macroeconomic context. Section 4 deals with the effects of dynamic provisioning model application. Section 5 concludes.

## **2. Regulatory framework for loan loss provisions**

The importance of specific provisions for credit risk or impairment adjustments states in the scope of their own set up, namely in creating a reserve used to cover expected loan losses while own funds serves to absorb unexpected losses. Thus to determine these provisions this requirement must be met. Moreover the specific provisions for credit risk are considered to determine some prudential indicators used as a base for assessment of soundness of credit institutions (the solvency ratio, large exposures, establishing the total amount to be deducted from own funds to determine their total level).

The relationship between accounting and prudential norms should not be underestimated. The differences in assessment methodologies may affect the values of various elements impacting on risk management. There is a fairly broad consensus that more forward-looking provisioning could help to bring accounting valuations closer into line with economic valuations and could eliminate a source of artificial pro-cyclicality (Borio, 2003).

According to NBR Regulation no.16/2012 in the Romanian banking system are used two methods of adjustment: prudential and impairment adjustments. Positive difference between the total prudential adjustments value and the total impairment adjustments is allocated as a prudential filter for determining the own funds and prudential bank indicators.

The prudential provisions are recorded in extra-balance accounts while the impairment adjustments are recorded in balance sheet accounts. Prudential adjustments are determined by applying the provisioning coefficient on gross exposure adjusted with value of collateral accepted as decreased risk factor. Provisioning coefficients are different on classification categories according to perceived risk. Classification of loans are made in five categories (standard, observation, substandard, doubtful and loss) based on debt service, financial performance and judicial proceedings. In assessing financial performance are considered both quantitative indicators (return on assets, return on equity, etc.) and qualitative (ability of manager, business, etc.). Under the framework of global

monitoring of the banks activity on the procedure set out in the Regulation (EC) No.1606/2002, starting with January 1, 2012 (NBR Order no.9/2010), the banking regulatory authority in Romania adopted the International Financial Reporting Standards (IFRS). With the adoption of IFRS, besides determining the prudential adjustments are determined also the impairment adjustments, both individually, for significant exposures which records impairments and collectively, for significant exposures which do not record impairments on one hand and insignificant exposures on the other hand. For impairment recognition must be applied IAS39 according to which *"A financial asset or group of financial assets is depreciated if there are objective evidences of impairment as a result of one or more events that occurred after the initial recognition of the asset and respective generating losses events have an impact that can reliable estimate the future cash flows "*. Among the indices for loan impairment may be mentioned: significant deterioration of the financial situation, the probability for opening the bankruptcy procedure or similar protection procedure, infringement of contractual terms, significant decreases in estimated cash flows for a portfolio of loans.

This modality to admit the credit losses allow to a bank to consider only past events and current conditions. The effects of future credit loss events cannot be considered. Thus, this recognition modality is perceived to have caused delay in the recognition of credit losses, the BCBS promoting and supporting the International Accounting Standards Board for change in the accounting standards towards an expected loss including use of information more forward-looking (BCBS, 2011) (IAS 39 will be replaced by IFRS 9 with annual applicability beginning on or after 1 January 2015 - IFRS).

This involves changes in the modality of determining the expected credit losses, including improvement of internal rating based approach for credit risk implemented by Basel II. Thus a credit institution would consider quantitative and qualitative factors that are specific to the borrower, including the entity's current evaluation of the borrower's creditworthiness. It will also consider general economic conditions and an evaluation of both in the present time and in future periods of the economic cycle. In the Greek banking system Dimitrios, Angelos and Vasilios (2012) find that non-performing loans can be explained mainly by macroeconomic variables (GDP, unemployment, interest rates, public debt) and management quality.

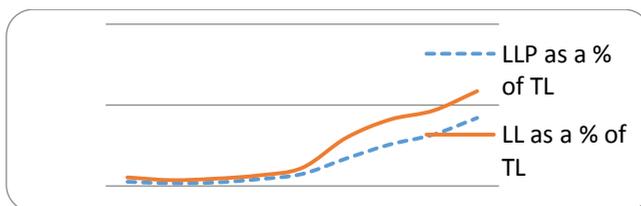
Raducanescu and Dima (2011), after the time of recognition of loss based on the economic cycle are considered two types of model for provisioning: static provisioning models and dynamic provisioning models. In case of static provisioning model, the provisions are determined considering the expected losses (regularly on yearly bases) on a certain moment in time. Dynamic provisioning is a statistical method for loan loss provisioning which uses historical data about estimate level of lending and average ratio of expected losses according to economical cycle phases (Raducanescu & Dima). Also states that applicability of static model to Romanian banking system is moreover motivated by determination of the capital requirements on a short term horizon.

### **3. The deterioration of loan portfolio in context macroeconomic**

Within the specialty literature, the cycle character of banking activity is address in many studies (Drehmann, Borio and Tsatsaronis, 2011, Borio, 2012, Borio, Disyatat and Juselius, 2013). Asea and Blomberg (1998) showed that banks change their lending standards, from tightness to laxity, systematically over the cycle. Majnoni

and Laeven (2002), found that many banks tend to delay provisioning for bad loans until too late, when cyclical downturns have already set in, possibly magnifying the impact of the economic cycle on banks' income and capital.

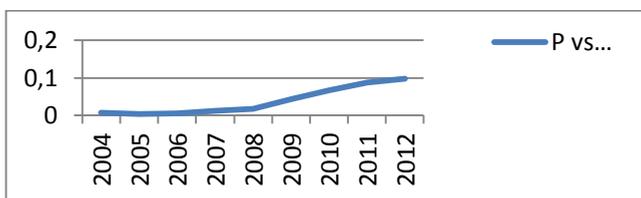
To understand and argue how the modality of provisioning for credit losses within the Romanian banking system may have a pro-cyclic character, we take the approach of deterioration of credit portfolio relative to GDP. Using the consolidated data to the Romanian banking system from the NBR website, figure 1 shows the loan loss provisions (LLP) and the loan loss (LL), both scaled by total loans, between 2004 and 2012.



**Figure 1:** Loan loss provisions versus loan loss ratios

Source: own processing

It is to be observed that provisions are lower than loans loss. Until the end of 2008 , under economic growth premises, we have a similar trend for both elements. Starting to 2009 under the financial crisis premises and due to economic decline (according to NBR data, real GDP decrease from 7.3 in 2008 to -6.6 in 2009, reaching 1.1 at the end of 2012), both loans classified as “losses” and related provisions recording a rapid increase. Until 2010 the growing rhythm of the credits classified as “loss” was more dynamic than the related provisions. After 2010 the related provisions knew a more rapid increase. The ascending trend of provisioning for losses and degree of their coverage on credits classified as “loss” showed that their level has been under evaluated.



**Figure 2:** Loan loss provisions on operating income and operating expenses ratio

Source: own processing

Figure 2 illustrates the importance of provision expenses relative to bank return on system level, an inverse relationship being observed between earnings and provisions in a recession (beginning with 2009).

Similar to Bikker and Metzmakers (2005) is observed that provisioning is substantially higher when GDP growth is lower, reflecting increased riskiness of the credit portfolio when the business cycle turns downwards. The findings are consistent with the call for the implementation of a dynamic provisioning system, similar to other authors. Thus Bouvatier and Lepeti (2008, 2012) found that loan loss provisions made in order to cover expected loan losses amplify credit fluctuations,

in contrast to forward-looking provisioning system which do not affect credit fluctuations.

#### **4. Effects of applying the dynamic provisioning model**

The dynamic provisions are a macro-prudential tool for enhancing bank soundness, with an anti-cycle character that allows to establish provisions higher during the economic growth periods and to use them in order to cover the losses within the economic decline phases. The strongly pro-cyclical nature of bank lending in Spain has led to the implementation of dynamic provisioning system in 2000 (Fernandez de Lis et al., 2001). The working of the Spain dynamic provisioning model and its theoretical mechanism is presented by Saurina (2009<sub>a</sub>, 2009<sub>b</sub>).

The current study does not present in details how to determine provisions for credit losses using the dynamic provisioning method due to lack of data, this being one of the reasons for inapplicability at the level of the Romanian banking system, so a simplified model is presented in exchange showing the influence of implementation of this method over the prudential situation of a credit institution (Table no.1).

The construction of the model is made for a period of three years based on the following hypothesis: the total value of credits to adjusted value of the gross profit and equity remains constant on the entire period; exposure on credits is expressed in lei and in the first two years is framed under prudential classification category "in observation" which provisioning coefficient is 0.02, and in the third year is framed under category "substandard", which provisioning coefficient is 0.05; total value of credits is equal to total value of assets; the provisions determined based on dynamic model are fiscal deductible; the risk level of the portfolio at the end of three years period is 21.33%; to determine solvency are used level I own funds (Tier I), considering that they meet the requirements for recognition.

Is to be noted that the total level of credit risk provisioning at the end of the third year is the same for both models: static and dynamic. Even so the static model does not allows recognition of future credit losses due to lack of identification of risks generating events and its credible assessment. This allows during economic growth recording of some comfortable prudential indicators and allocation of the profits as dividend to shareholders or amplification of lending activity. Instead estimating losses based on some macroeconomic indicators the dynamic provisioning model allows setting up provisions reserves by allocating current earnings in order to cover the future losses.

Thus, as noted from the recorded value of the solvency ratio at the end of the third year, banks that does not establish during the economic growth period reserves to cover future credits losses, records disruption of business activity and are more exposed to the risk of insolvency.

**Table no. 1: Provisioning models**

	Static model			Dynamic model		
	Year1	Year2	Year3	Year1	Year2	Year3
<b>Assets</b>						
Total loans to the value adjusted	1500	1500	1500	1500	1500	1500
Stock of prudential adjustments	75	75	300	75	75	300
Stock of impairment adjustments	30	35	320	30	35	320
Stock of statistical provisions				140	285	0
Total loans to the net value	1470	1465	1180	1330	1180	1180
<b>Income Statement</b>						
Gross profit	150	150	150	150	150	150
Expense provisions	30	5	285	170	150	0
Deductible expenses of prudential filters	45	40	0	0	0	0
Taxable profit	75	105	0	0	0	150
Tax (16%)	12	16.8	0	0	0	24
Net profit	108	128.2	-135	-20	0	126
<b>Shareholders' Equity</b>						
Equity	150	150	150	150	150	150
Net profit	108	128.2	-135	-20	0	126
Total own funds	258	278.2	15	130	150	276
Prudential filters	45	40	0	0	0	0
Total adjusted own funds (Tier I)	213	238.2	15	130	150	276
<b>Equity to Asset</b>	14.49	16.26	1.27	9.77	12.71	23.39
Solvency: Equity to Assets $\geq$ 4%	Solvent	Solvent	Insolvent	Solvent	Solvent	Solvent

Source – own processing

Notes: Total loans to the value adjusted represent gross exposure reduced by related guarantees. Prudential adjustments are determinate according NBR Regulation no.16/2012. Impairment adjustments are those identified as probable and estimable. Statistical provisions are those taken under the dynamic provisioning model.

#### 4. CONCLUSIONS

Given the direct influence of provisions for credit losses over the profit, and indirectly over the capital of a credit institution, the methodology for establishing them is rather important. The current study presents in the Romanian banking system the regulatory framework for establishing specific credit risk provisions and the effects of its application on the prudential situation of credit institutions. The study highlights that the current model used, respectively the static model, is permissible in recognition of future losses, with a pro-cyclical character with a negatively influence on the financial stability of banks. To address this issue it is necessary the early identification of risks to the loan portfolio quality and the early recognition of losses. Consequently it is required the need for changing the accounting methodology and risk recognition by using information that is more forward-looking in order to avoid oscillations in activity and disturbances in the financial statements. This will allow the capture of asset quality deterioration and better asset quality assessments and supervisory reporting. More accurate identification of the factors and their influence on the loan portfolio remains an open issue and will continuing to be the subject of the future researchs.

#### 5. Acknowledgements

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# THE IMPACT OF FINANCIAL LIBERALIZATION ON ROMANIAN BANKING SYSTEM EFFICIENCY

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**Abstract:** *In the last three decades, many emerging countries have moved away from a system of restrictive monetary and financial controls to a more liberalized financial sector. The restrictive imposed policies were expected to contribute to industrialization of the economy and to the stability of the banking sector. However, financial liberalization had big costs on the banking system's competitiveness and efficiency. Financial liberalization has a different impact on banking markets. Thus, there is no size that fits all policies concerning banking liberalization process. For highly efficient banks, competition is improving their efficiency standard, while less efficient banks can't compete with foreign banks and further are decreasing in efficiency or are driven out of the market. Overall, the average efficiency of domestic banking markets should be an important variable in deciding to open up their banking market. Banks that are operating close to the frontier, in general are improving their efficiency following financial liberalization process. Banks that are operating in a further distance can't manage to compete with foreign market entrants, so, they are losing from liberalization process. In this article we propose to measure the impact of financial liberalization process on Romanian banking system. We used the panel regression to study the informational efficiency of three Romanian banks during 2004 - 2012. The dependent variable of the model was the price of stock bank, and the independent variables were the financial indicators (return on equity, return on assets, net profit margin). In the second regression we introduce a dummy variable for crisis period. Our results show that the financial indicators choose do not affect the efficiency of Romanian bank, but the crisis had a negative impact on them. International context, credit risk, the implementation of Basel III and reducing exposures in the absence of investment alternatives remains key challenges to the Romanian banking system in future.*

**Keywords:** *financial liberalization; bank; return on equity; return on assets; net profit margin*

**Jel classification:** O16; G21; G23

## 1.Introduction

One of the most important decisions taken by national authorities during the last three decades was the liberalization of financial systems. This process was developed in many emerging market economies from Europe, Latin America, Asia and Africa. The financial deregulation aimed, essentially, to sustain the economic growth, through the smooth progress of financial development.

The measure of financial liberalization were meant to eradicate financial restrictions, by making the central bank more responsible in implementation of monetary policy, restructuring and privatization of financial institutions, eradication of credit control, liberalization of interest rate, removal the obstacle on capital flows, elimination of barriers on competition among financial players, and liberalization of equity markets. Financial liberalization has a positive impact on financial development, according to the finding of several research studies. Financial deregulation leads to better financial evolutions by improved risk sharing between the domestic and foreign intermediaries (Henry 2000a). Better risk sharing can reduce the cost of capital tempting additional investment and growing the level of investment (Henry 2000b, Bekaert and Harvey, 2000), but can also conduce to investments in riskier higher expected return projects (Bekaert, Harvey and Lundblad, 2005). So, financial liberalization is associated with financial flexibility – the efficiency in which capital can be reallocated and supervised.

Improved financial intermediation is frequently associated with a higher economic growth. There are a large literature suggesting that financial development contributes to economic growth, by decreasing the investment costs and pooling capital more efficiently (Lucas, 2005; King and Levine, 1993; Beck, Levine and Loayza, 2000), although a few studies indicate the contrary (Devereux and Smith, 1994).

In many economies, the banking system is the most important component of financial sector, having an essential role in promoting of the economic growth. This is the reason for why the financial deregulation process referred in a large extends to the banking system liberalization. The banking reforms consist in the abolition of the credit control, liberalization of interest rate, privatization of state-owned banks and elimination of barriers in capital flows. The liberalization in banking system seek to improve the efficiency of the banks, to acquire a better allocation of credits, to encourage savings and, consequently, to achieve a higher economic growth.

Difficult economic context has influenced the Romanian banking system, both in the savings, and lending. The biggest challenge for banks was credit risk, given that non-performing loans have increased and are expected to increase further due to financial crisis.

In the context of unpredictable economy and volatile financial markets, the Romanian banking system is facing one of its toughest tests. In addition, the financial position of many banks became more difficult, some of them being forced to absorb significant losses in sovereign debt crisis. Now banks have to regain the confidence of markets and the public, to absorb new regulatory requirements, reduce costs, focus on core activities and increase lending, while ensuring a balance between risk and reward.

In this paper we analyze the impact of financial liberalization on Romanian banking system efficiency. The paper is structured as follows. In section 2 we reviewed the prior literature on the impact of financial liberalization on banking system. Section 3 presents the empirical methodology we have applied to measure the impact of financial liberalization on banking system. In section 4 we showed the results of our empirical investigation and discussed it. Section 5 comprises the most important conclusions of our analysis.

## 2.Literature review

The theory of financial liberalization process is based on McKinnon (1973) and Shaw (1973) works, which is focused on the economic benefits of liberalization.

Denizer, Dinc and Tarimcilar (2000) examine the bank efficiency in pre and post-financial liberalization period in the Turkey during 1970-1994. Their empirical results show that financial liberalization reforms were followed by a decline in bank efficiency.

Bonaccorsi di Patti and Hardy (2005) analyzed the impact of banking system reform on the productivity and cost productivity in Pakistan and on the efficiency of groups of banks (state-owned, foreign, private domestic and privatized). Their result show that the first wave of liberalization in 1991-1992 generates a higher profitability due to the increase in revenues more than the costs, but during 1998-2002 profitability recorded a decline due to a negative contribution from business conditions that more than offset an increase in profit productivity after the second wave of reforms. Efficiency by groups of banks recorded various levels: state owned banks are least efficient, the privatized banks improved their efficiency immediately after their privatization, and the new private domestic banks are among the most efficient and sometimes out-performed the foreign banks. As a result, banking liberalization led to a higher banking performance, especially between 1993 and 1997. A similar research is the empirical study of Abbas (2010) who analyzes the impact of financial liberalization and deregulation on the bank performance in Pakistan, finding that the banks efficiency has improved during 1990-2006. Regarding the group banks' efficiency the more efficient are foreign banks, followed by private banks, nationalized commercial banks and privatized banks.

Studying the relationship between financial liberalization and bank performance in India between 1991 and 2001, Koeva (2003) find that industry concentration, profitability and bank spreads in bank industry have decrease during the period of liberalization. Ghosh, Harding and Phani (2008) examined the impact of foreign banks entry liberalization on agency costs in India, finding that the gains of private banks were almost double than those of national banks after liberalization. They also find a significant relationship between firm-specific abnormal returns and factors usually associated with a bank's potential for takeover. They conclude that the expected gains from the reduction of agency costs represent one reason of the valuation gains associated with banking liberalization.

Williams and Nguyen (2005) examine the impact of financial liberalization on banking performance in South East Asia during 1990-2003. Their findings indicate that bank privatization reform increases bank efficiency performance more than other types of liberalization reforms. Hermes and Nhung (2008) study the impact of financial liberalization on bank efficiency in ten emerging countries from Latin America and Asia during 1991-2000, finding that financial liberalization has a positive impact on bank efficiency.

Maudos and Solis (2011) analyzed the evolution of banking competition in Mexico between 1993-2005, a period characterized by deregulation, liberalization and consolidation of banking system. They found a diminishing in competitive rivalry in the deposit market and a boost in the loan market. The banking reform increased the risk aversion of banks, causing a discouragement to finance private activities which were more profitable, preferring to finance only the less risky which low return. They

conclude, however, that the banking liberalization has certainly revealed consequences.

Adjei and Chakravarty (2012) studied the impact of banking liberalization in Ghana, characterized by the entry of foreign banks, on the cost efficiency of banks. They find that there is an obvious difference in efficiency scores within and between groups by type of ownership, but foreign ownership is not the determining factor. Foreign owned banks existing before liberalization have, on average, performed better in comparison with those that entry after liberalization, but there is a significant difference in efficiency within banks under comparable ownership type.

Parlour, Stanton and Walden (2012) analyze the financial development, intraeconomy capital flows, the size of the banking system, the value of intermediation, expected market returns and the risk of bank collapse. Their empirical result suggests that market's dividend yield is associated to its financial flexibility and capital flows has an important role in explaining expected returns and the risk of bank collapse.

### 3.Methodology

In order to investigate the impact of financial liberalization on Romanian banking system efficiency, we estimate the following panel regressions:

$$p_{it} = c_1 + c_2 * ROE_{it} + c_3 * ROA_{it} + c_4 * MARJ_{it} + \varepsilon_{it} \quad (1)$$

$$p_{it} = c_1 + c_2 * ROE_{it} + c_3 * ROA_{it} + c_4 * MARJ_{it} + c_5 * DUM_t + \varepsilon_{it} \quad (8)$$

where:

$p_{it}$  – represents the price of stock bank  $i$  at time  $t$ ,

$ROE_{it}$  – represents the return on equity ratio of stock bank  $i$  at time  $t$ ,

$ROA_{it}$  – represents the return on assets ratio of stock bank  $i$  at time  $t$ ,

$MARJ_{it}$  – represents the net profit margin ratio of stock bank  $i$  at time  $t$ ,

$DUM_t$  – represents the dummy variable, which takes the value of zero for the period before global financial crisis, respectively one for the period that includes the actual crisis.

We introduce the dummy variable in order to see if the current financial crisis has an impact on Romanian banks efficiency.

### 4.Data and empirical results

#### 4.1.Analyzed data

The analyzed data are quarterly and includes the period Q2 2004 – Q4 2012. We have four banks listed on Bucharest Stock Exchange: Commercial Carpatica Bank (2004), Romanian Bank for Development (2001), Erste Bank (2008) and Transilvania Bank (1997).

In 2012, the Romanian banking system has 365.9 billion RON assets. BCR remained the largest bank in Romania, as asset portfolio. This financial institution held last year, a market share of 19.3%, with assets of 70.6 billion lei. In second place is situated BRD, which approached the threshold of 13% in four years of crisis losing about one percentage point in the share market. Bank had trouble, so ended 2012

with a loss of 332 million lei, after the first years of the crisis was the most profitable. Transilvania Bank holds the third position, thus strengthening its market status, achieving notable growth rate of assets from one year to another, without profit to compromise, which in 2012 grew 40%. During the crisis proved to be the most dynamic large bank, gaining two percentage points in market share during 2009 – 2012 (table 1).

**Table 1: Romanian banks**

Bank	Ticker	Assets (billion. RON)	Share market in 2012 (%)
Romanian Commercial Bank	BCR	70.6	19.3%
Romanian Bank for Development	BRD	47.9	13.1%
Transilvania Bank	TLV	29.3	8%
Commercial Carpatica Bank	BCC	4.7	1.2%

We choose to analyze the banking system efficiency by using the daily closing values of three Romanian banks: Commercial Carpatica Bank - BCC, Romanian Bank for Development – BRD, and Transilvania Bank – TLV. All closing values are expressed in national currency.

The financial indicators (return on equity, return on assets and net profit margin) are also quarterly and are calculated for each bank. In table 2, we can see the descriptive statistics of the analyzed variables.

**Table 2: Descriptive statistics**

	p	ROE	ROA	MARJ
<b>TLV</b>				
Mean	0.03348	0.04412	0.14638	0.15041
Median	0.01016	0.04219	0.00377	0.12920
Maximum	0.58170	0.17064	4.97953	1.00674
Minimum	-0.44966	0.00018	0.00001	0.00165
Std. Dev.	0.22864	0.03760	0.84099	0.17976
Skewness	0.23992	1.96486	5.65928	3.35641
Kurtosis	2.63727	7.58887	33.02813	16.04988
Jarque-Bera	0.52765	53.22992	1501.78900	314.06840
Probability	0.76811	0.00000	0.00000	0.00000
<b>BRD</b>				
Mean	0.07122	-0.01536	0.00504	0.20146
Median	0.04259	0.05164	0.00587	0.15204
Maximum	1.62471	0.12844	0.01177	2.27383
Minimum	-0.51039	-2.30438	-0.00714	-0.23759
Std. Dev.	0.33931	0.39996	0.00381	0.37854
Skewness	2.74463	-5.58520	-0.79606	4.82349
Kurtosis	13.84847	32.48321	4.39968	27.28474
Jarque-Bera	215.57250	1449.63700	6.55368	995.76870
Probability	0.00000	0.00000	0.03775	0.00000
<b>BCC</b>				
Mean	-0.08149	-0.01207	0.00033	-0.03555

Median	-0.07038	0.00810	0.00072	0.00995
Maximum	0.12254	0.08098	0.01268	0.17835
Minimum	-0.47944	-0.25885	-0.02074	-0.65816
Std. Dev.	0.12106	0.07236	0.00689	0.21543
Skewness	-0.88045	-2.06037	-1.13465	-1.66131
Kurtosis	4.66046	6.94561	4.80763	4.80593
Jarque-Bera	8.54273	47.46626	12.27514	20.85596
Probability	0.01396	0.00000	0.00216	0.00003

Source: Own processing in Eviews

## 4.2. Empirical results

Aggregate annual results of Romanian banking system show that the analyzed period was a difficult one for banks. Romanian banking market was characterized by an increase in household deposits and lending activity slow. It is surprising to see that financial indicators did not affect the evolution of bank stocks (table 3).

**Table 3: Empirical results without dummy variable**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
C	0.0123 (0.4619)	0.0070 (0.2798)	0.0126 (0.4778)	0.0113 (0.4261)	0.0073 (0.2951)	0.0074 (0.2962)	0.0117 (0.4430)
ROE	0.0917 (0.8465)	0.0801 (0.7545)	0.0920 (0.8536)		0.0804 (0.7617)		-0.0374 (-0.4332)
ROA	0.0071 (0.1378)	0.0061 (0.1184)		0.0080 (0.1553)		0.0071 (0.1392)	
MARJ	-0.0516 (-0.5841)		-0.0512 (-0.5825)	-0.0379 (-0.4368)			

Source: Own processing in Eviews

Notes: White *t*-statistics are in parentheses. \*, \*\*, \*\*\* indicate statistical significance at 10%, 5% and 1% levels.

Romanian banks experienced an economic slowdown following the current crisis, most implementing comprehensive structural reforms in an effort to reduce debt. Restrictive fiscal policies, tightening credit standards and reduced degree of indebtedness, as appropriate and immediate measures to mitigate the risks associated recession have had a negative contribution to banks evolution. Our results from table 4 confirm the idea said above: the value of dummy variable is negative and significant at 1 percent, respectively 5 percent.

**Table 4: Empirical results with dummy variable**

	(8)	(9)	(10)	(11)	(12)	(13)	(14)
C	0.0991 (2.3161)	0.0836 (2.0815)	0.0989 (2.3215)	0.1008 (2.3697)	0.0837 (2.0917)	0.0857 (2.1635)	0.1006 (2.3755)
ROE	0.0584 (0.5493)	0.0409 (0.3896)	0.0595 (0.5627)		0.0421 (0.4032)		
ROA	0.0177 (0.3516)	0.0152 (0.3015)	-0.0901 (-1.0355)	0.0185 (0.3697)		0.0159 (0.3179)	
MARJ	-0.0915 (-1.0467)			-0.0840 (-0.9758)			-0.0823 (-0.9615)

DUM	-0.132**	-0.122**	-0.1305**	-0.135***	-0.121**	-0.125**	-0.1339***
	(-2.5506)	(-2.401)	(-2.5413)	(-2.6473)	(-2.395)	(-2.502)	(-2.6374)

Source: Own processing in Eviews

Notes: White *t*-statistics are in parentheses. \*, \*\*, \*\*\* indicate statistical significance at 10%, 5% and 1% levels.

## 5. Conclusions

The major objectives of financial liberalization process were to improve the performance of banking system, respectively to make it more competent and efficient. However, the analyzed banking system continues to play an important role as a resource mobiliser. It remains the principal source of resources for households, small and medium enterprises. Also, it caters the large industries and provides many other financial services.

The Romanian banking system was not enough liberalized, so it was affected by the global financial crisis. There were deepened losses in the banking system; it reached an average of 53 million in 2012, as a result of raising the cost of credit risk, which exceeded the operating profit in some cases. Ratio of the gross customer loans and deposits in the banking system was deteriorated, it rise to 120.12% at the end of 2012, indicating ensuring the necessary liquidity from banks mother. National Bank of Romania scored some changes in the monetary policy rate during 2008 - 2012, when the interest rate was decreased to 5.25% from 10.25% as it was in early.

International context, credit risk, the implementation of Basel III and reducing exposures in the absence of investment alternatives remains key challenges to the Romanian banking system in future.

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# THE NEED TO REFORM THE BANKING SYSTEM – A PREMISE FOR THE IMPLEMENTATION OF THE BASEL III ACCORD

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**Abstract:** *The application of banking reform measures represents a real challenge for banks in this post-crisis period also leading to the rapid implementation of the Basel III Accord. The causes of financial-economic crisis must be identified and dealt with, one of the difficulties the banks face being that to quantify and take risks. The banking system was characterized by weaknesses in the recent global financial crisis. These weaknesses were related to: too much leverage in the banking; not enough high quality capital to absorb losses and an excessive credit growth based on underwriting standards and under-pricing of liquidity. It is felt the need to move from "deregulation" to an accurate banking regulation process, based on an appropriate mix of macroeconomic policies, that is to the ensurance of a balance between the policies meant to stimulate the demand and those policies which can stimulate the demand. The problem of banking regulation is also taking into account the reactions of the business world which emphasizes the fact that an exaggerated regulating process which supresses innovation would be a major risk.*

*Many of the changes in the banking system are inspired by the final draft of the G-20 reunion, that of developed countries, in November 2008, a draft considering the economic re-launch and reform. Basel III considers the reform of the banking system by measures whose cover area is much larger and they refer to both the micro-prudential framework and to the macro-prudential one. The application of all the measures established by Basel III Accord is expected to end by 2019, with different effects in the main segments of banking business: retail, corporate and investment banking. The impact of Basel III implementation in the banking system of the USA is almost similar to that of Europe's, with slight differences regarding the capital and the reduction of mortgage rights, which play a more important role in the USA, the latter having another starting economic point than Europe.*

**Key words:** *banking reforms; macro-economic perspective; monetary policy; bank corporate governance; countercyclical capital, credit crunch, bank leverage.*

**JEL Code:** G01, G21

## 1. Introduction

After the 2000s, the international financial market has evolved stronger and stronger, an evolution many considered to be one leading to an unrealistic economic growth; starting from the American contagion (Badea, Socol, et al. 2010, 192), determined by the "subprime" loans, with a high risk of not being reimbursed by the debtors and expanding on the European economy. Banking institutions were free to find their own strategies for loans and to establish the assumed levels of risk. Also, (Badea, Socol, et al. 2010, 192), the investment funds transferred mortgage loan packages to investors, which, in combination with derivatives have created a chain reaction, leading to the impossibility for the debtors to pay off their loans. The overvaluation

of real estate properties, concomitantly with the failure to pay the loans have led to the creation of inefficient bank guarantees. The losses have been felt both by investors as well as by banks, thus influencing the international financial-banking relations, a fact which has led to the generalization of the crisis at the global level. The clients' lack of trust in the banking system has been felt especially in the contracting of much less loans, these becoming more expensive, and the liquidities of banking institutions less and less.

What happened in 1929-1933, represents, also, a lesson of the banking crisis which has not been learnt too well. In that time, too, just like in the case of the current crisis (since the end of 2007), the banks went bankrupt and the credits slowed down. The crisis expanded in most of the economies of the Western countries and the state became the refuge for the banking system.

All these problems have led to a reform of the banking sector. If in 1933, the reform (Mășu și and Gheorghe 2009, 208) meant the devaluation of dollar, economic and social aids, the launch of new projects and works, the self-limitation of agricultural production, that is a series of measures attempting an economic re-launch, we can say that in the present history is repeating and that these crises have a common point the **"credit crunch"** effect, that is the rarefaction of loans. This effect is often associated with the liquidity crisis (Mășu și and Gheorghe 2009, 209), a reason making us to analyse certain banking regulations and norms, like those of Basel Accords.

## **2. Opinions and orientations in reforming the banking system**

If Basel I Accord, in 1988-1995, by the measures proposed managed to introduce increments of own funds in the banking institutions and by these to improve the economic-financial situation, Basel II, which comes little before the crisis break out (at the end of 2007) contains also recommendations both for governments and for central banks. The recommendations are related both to prudential policies (protection of deponents, measures for the banking institutions in difficulty, the setting up of an appropriate minimum capital of own funds that the banks must comply with), as well as the need to adjust the drawbacks noticed in the banking system, due to failures to appropriately manage the risk, when attempting to ensure a real banking transparency and discipline (Stiglitz 2010, 202).

There are different opinions belonging to economists and business people regarding then banking regulation activity and the way in which this activity should be carried out. No matter it is about "ten construction sites" of the reform (Mășu și and Gheorghe 2009, 222), mentioned by C. Chavagneux in an article; about "nine propositions to end up the crisis" belonging to Lordon F (Lordon 2008, 169); or about "twelve recommendations for the reform application" belonging to Pastre O. and Sylvestre J.M. (Pastre and Sylvestre 2008, 216-218), all have the role to bring a new financial architecture and to build a new banking system.

The sites of the reform could start in Lordon F.'s opinion with "desecuritization" activities, noticing that a part of the disaster made by the crisis has been due to the transformation of debts into bonds, currently being necessary a reverse operation, that of limiting the bonds in a loan portfolio.

The "leverage" is also a risk generator, leading to financial speculations. A reverse operation would be necessary, that of "debt deleveraging" (Lordon 2008, 174-175), by charging some very high percentages of material cover up, in a proportion of 80-90%, with own funds, which would lead to the decrease of such operations.

The anti-speculation monetary policy is part of the activity of Central European Bank, and as Maucour O. (Maucour 2009, 191-205) stated in an article on Basel II, The Basel Committee must propose certain provisions referring to the rating agencies, credit derivatives and the securitization operations that should be added to the Basel II Accord; in this way, there will be prudential rules meant to bring stability to the banking system. Each country's central bank, together with the central banks part of the Basel Committee must set up a minimum level of own funds for the banking institutions. These are propositions by which this Basel II Accord will be updated, changed and completed; many of these changes will be agreed upon and subsequently applied through the Basel III Accord.

Even the problems regarding the change of accounting norms have the role of representing the basis for the reformation of the banking system, because during crisis, together with the decrease of the value of assets, the firms can give up the "real value" of these and adjust the account value in accordance with the market decrease, as it could be seen at the end of 2008. These accounting norms must better reflect the economic value.

A largely debated problem was that of regulating the "tax havens". If the objective of these areas called tax havens was to increase evasion by exiting the fiscally regulated areas and the recording of the trade in the so-called "offshore" financial areas, from now on the regulation of all the financial operators is becoming necessary, which compares tax havens with some "black holes", which should not exist and their disappearance should rebuild the international banking system (Mășu, Buneci and Gheorghe 2009, 225).

The causes of the current economic-financial crisis should be identified and dealt with, one of the difficulties of banks being that of quantifying and taking risks.

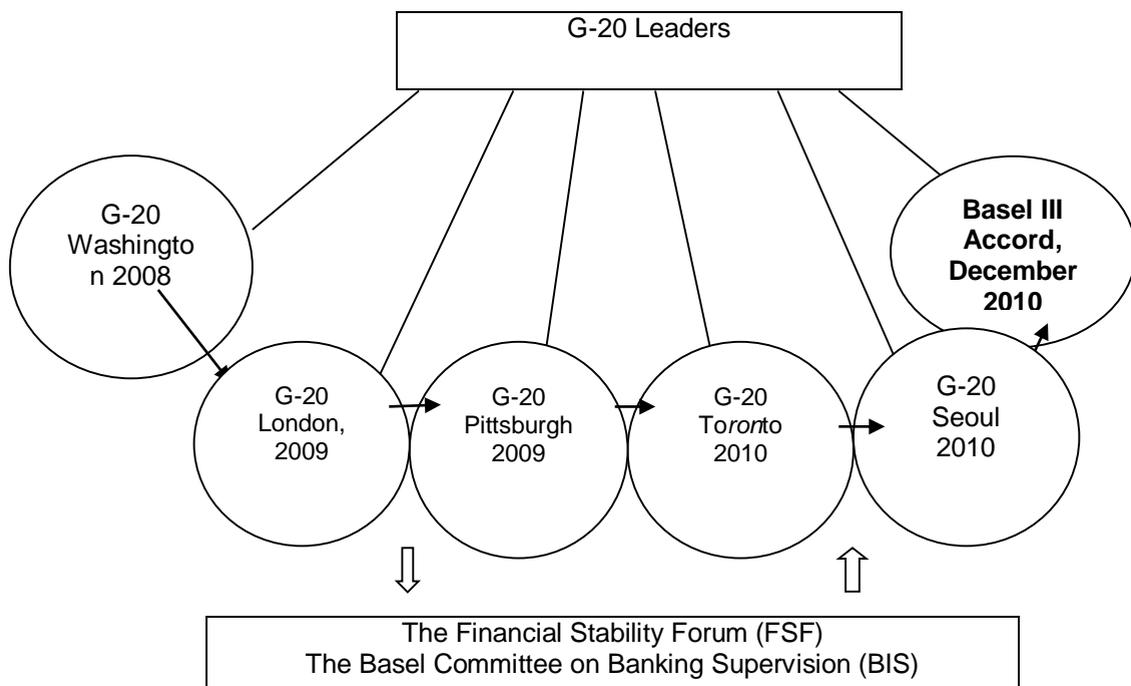
In order to exit the crisis, "*the world economy cannot work continuously with only one engine*" (Rădulescu 2012, 36), that is the American one, from which the crisis started for it expanded worldwide and, in time, it has been noticed that this way of working created economic imbalances. "*Europe, with a much more balanced commerce (from the point of view of deficit/surplus) was playing the role of moderator between the American and Asian flows*" (Rădulescu 2012, 36). That is why there is this stringent need to get to "deregulation" towards a fair banking regulation, based on an appropriate mix of macroeconomic policies, that is towards the ensurance of a balance between the policies meant to stimulate demand and those policies which can stimulate supply.

There is, also, the problem of banking regulation taking into consideration the so-called "exaggerated reactions" of the business world which emphasize the fact that a major risk would be to exaggeratedly regulate thus killing off innovation.

In Stiglitz's opinion, deregulation would have taken place "*when the dangers of excessively taking risks increased, due to the new financial products*" (Stiglitz 2010, 157). These new financial innovations must help correctly manage the banking risks and not amplify the risk. The bankers should not avoid the rigour of regulations, they must ensure the banking transparency, give up those "innovating" products presenting a high risk for the bank to the detriment of its clients.

### 3. The effects of G20 reunion on the creation of Basel III Accord

There have been several precursory stages to the setting of Basel III Accord which were the result of the numerous meetings of the G20 Group. The new elements brought into discussion by the group of the 20 member states (at Washington, London, Pittsburgh, Toronto, Seoul) had in view the implementation of new banking regulations and Basel III Accord represented their finality.



**Figure 0. Basel: the creation of Basel III Accord**

Source: (Constantinescu, 6), <http://www.paneuropa.ro/doc/CRDIV.pdf>

Many of the changes in the banking system are inspired by the final document of the G-20 meeting, of developed countries, in November 2008, a document targeting the economic re-launch and reform based on several directions (Mășu și and Gheorghe 2009, 234):

- **the integrity of financial markets** – can be done by assembling all important banks and by creating "supervision colleges";
- **the reformation of some financial institutions** – such as IMF and the World Bank, thus contributing to the financial stability, to the re-launch of loan activity to the emerging countries;
- **exigency and control** – which requires a better banking supervision, carefulness and control in appropriately managing the risks;
- **support for helping the world economy** – to exit the crisis and economic re-launch.

At the G20 Summit in London in April 2009, the debate was centred on problems regarding the harshening of the reforming rules of the financial sector and it was

forecasted that all the members present at this meeting should progressively adopt the regulation framework and the Basel Committee on Banking Supervision and the national authorities develop and agree on a new global framework of these financial institutions which should solve the problems regarding a much stronger, better quality liquidity, as a short-term cover (Financiarul, 25 June 2010). The G20 Group considered that the new Basel III Accord should be finalized by 2011, in this way it could be implemented much sooner.

In September 2009, at Pittsburgh, the G20 Group laid down a report regarding the promotional actions of the financial regulations established, according to which global standards should be implemented constantly so that they ensure *"a permitted and authorized level to fragment the markets, to protect and umpire the rules"* (BIS, 2010). In their opinion, progress can be achieved only with the help of the Decision Group of the trans-border banks, of the Basel Committee on Banking Supervision and of the World Bank, which establish recommendations for authorities on the problem of crisis management and decision making processes.

In 2009, too, the Basel Committee on Banking Supervision published two consultative documents, in December, with the title ***"The Resistance Consolidation of the Banking Sector"*** a document the press and the Internet wrote about, using as a title "Basel III" and a second document: ***"International Framework for Liquidity Risk Measurement, Standards and Monitoring"***. These are part of the activity of the Basel Committee, yet they are just projects not representing a legal framework for a new accord. The news brought by this accord will have a major impact on the banking sector, on the loan offer and on the economic growth problems (Financial News 16 April 2010).

All these meetings continued with those from Seoul and Toronto, in 2010, had as final objective the materialization of this accord, in the same time establishing solutions for the recent economic crisis.

An appropriate solution to exit the crisis came from the G-20 leaders, who had agreed within the International Monetary System to create a Programme for the improvement of the destabilization effects of capital flows, yet together with global liquidity management measures, in order to prevent the shocks.

The introduction of the Basel III Accord is due to several reasons (Nucu 2011, 58) easy to understand:

- **the disastrous effect of banking crises**, noticed by losses of economic productions with approximately 60% of GDP, in the period before the crisis;
- **the frequency banking crises precede one another with** (since 1985 to present there have been over 30 banking crises in the Basel Committee member states);
- **the benefits brought by the Basel III Accord** which must overcome the cost of implementing this accord, based on the reason that a solid banking system leads to a sustainable development and it has long-term positive effects.

#### **4. Micro and macro-prudential measures at the banking system level**

As compared to the other two Basel accords, Basel III targets the reforming of the banking system through measures whose cover area is much larger and which refer both to the micro-prudential framework as well as to the macro-prudential framework.

The immediate objective of these regulations is to limit the risk of new financial-banking crises, which, implicitly, lead to system crises and the need to use a macro-prudential approach based on supervision rules. In order to realize the importance of these rules, we have used a comparison between the macro and micro-prudential perspective:

<b>Macro-prudential Perspective</b>	<b>Micro-prudential Perspective</b>	
<b>Immediate objectives</b>	Limiting the financial crises so that they do not become systemic	Limiting the difficulties of banking institutions at the individual level
<b>Final objectives</b>	Avoiding the costs regarding the GDP	Protecting both the consumers (investors or deponents) and the banks
<b>Characterization of risk</b>	Considered being dependent on a collective behaviour (endogenous)	Considered being independent from the individual behaviour (exogenous)
<b>Correlation of banking institutions</b>	Important	Not important
<b>Carrying out prudential control</b>	In terms of risk: from the top down	In terms of each banking institution's own risk: from the bottom up

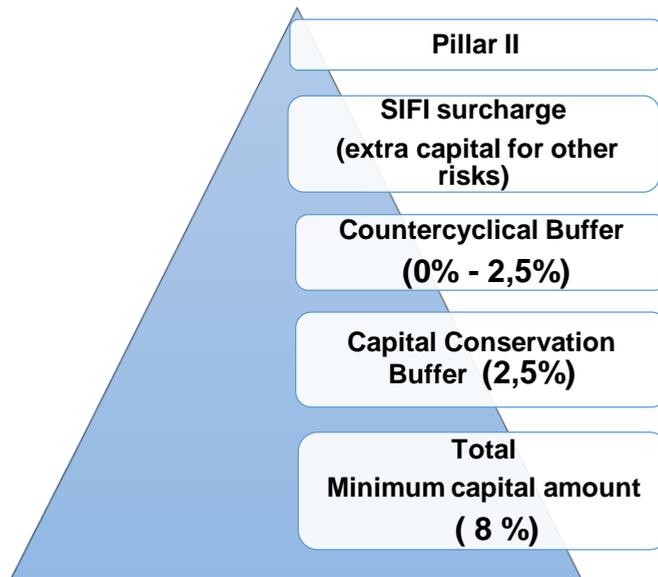
**Table 1:** The comparison of macro and micro-prudential perspectives at the level of banking institutions

Source: processed after (Borio 2011, 159)

At the **micro-prudential** level there is the need for measures stipulating a consolidation of the quality of banking capital, mainly following own capitals (capital reserves, the reported financial result), the minimal requirements of level I own funds (own funds and hybrid instruments), and the reconfiguration of some eligibility criteria for the instruments necessary to determine level I own funds. Due to the problems emphasized by the current crisis, there is the need for an increase in the exigencies to cover the risks, a limitation of the leverage effect (as an additional measure to the capital requirements) and not in the least the setting up of some liquidity standards, both on short term (30 days) in order to cope with the liquidity crises and on long-term (1 year) for an as solid as possible profile of structural liquidity (Nucu 2011, 59). The **macro-prudential** perspective (RNB Report, 2011, 124) presents anti-cyclic measures:

- the introduction of an anti-cyclic capital damper having the role of banking protection against systemic risks associated to the non-sustainable increase of the credit and of a fix capital preservation damper in order to cover the losses if the bank has financial problems;

- the calculation of the leverage effect in order to limit the level of debt of the banking system during periods of economic boom;
- measures for the systemically important banks, oriented towards the reduction of their bankruptcy probability and impact; the establishment of equal competition conditions they have in view reducing the competitive advantage that these banks have in the area of funding; the reduction of the cost owed to the public sector intervention. Also, they have in view supplementary requirements to diminish the losses, yet, also supplementary capital fees for “capital surcharges” banks.



Graph 1: Topping up further

Source: (Constantinescu, 17), <http://www.paneuropa.ro/doc/CRDIV.pdf>

Carrying into effect these measures depends on the transition period available to meet the requests. If the period of time is short, banks prefer narrowing their loan offer in order to raise faster the level of capital and to change the structure of assets. If the implementation takes place gradually, in a longer period of time, this impact can diminish and banks can find other ways: profit capitalization, share issue, change in the structure of liabilities, etc. Although the period of transition for the implementation of these measures is either shorter or longer, the consolidation of the financial system is carried out.

## 5. Conclusions

We could say that the compliance with the terms of Basel III implementation is important for the consolidation of the banking system and the responsibility of this implementation lies not only on the regulating bodies specialized in this implementation, but also on the specialists on problems of risk management, at the level of banks. Also, banking audit has an important role in reviewing and disciplining the efforts to apply these regulations. The application of these measures represents

a serious challenge for banks in this post-crisis period and state uncertainty. The economic growth is quite weak and the sovereign debts have emphasized the fragility of the financial-banking sector.

The application of all the measures established in the Basel III Accord is expected to be over by 2019, with different effects on the main banking business segments: retail, corporate and investment banking. The retail activity and that of corporate banking especially affected by those provisions of Basel III Accord regarding the capital and liquidity superior requirements and the investment banking activity suffers changes at the level of capital markets. The market of OTC derivatives will be affected by the fact that the banks must have a superior level of capital in order to be able to cover, apart from the other risks, the credit risk of the counterparty and the market risk.

The impact of implementing Basel III in the banking sector in the USA is almost similar to that of Europe's; there might be slight differences regarding the capital and the deduction of mortgage rights, which play a more important role in the USA, having another economic starting point than in Europe.

Regarding the regulations proposed by Basel III Accord, they have a more reduced impact at the level of our country. This is due to the fact that the banks are capitalized well enough, this capital being made up of level I own funds which own 80% of total own funds afferent to the banking system, at the end of 2011; capital hybrid instruments are almost missing and the aggregate leverage effect shows a value of 6% (which is according to the requirements), therefore the new norms will be seriously felt at the level of Romanian banking system. The challenge (Nucu 2011, p.68) for the Romanian banking system knows other directions, too, such as: the design, quality of data and the complexity of reporting. Also, an as efficient as possible banking corporate governance and which corresponds to the business model and risk profile is more than opportune for the implementation of the Basel III Accord. Regarding the liquidity standards, The Romanian National Bank stated that liquidity supervision in the case of branches should be the authority's task in the host member state and these standards should be applied both at the individual level and at the consolidated level.

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## FINANCIAL DEVELOPMENT, INSTITUTIONS AND ECONOMIC POLICY – PANEL DATA EVIDENCE

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**Abstract:** *In recent years significant researches have been done to identify what are the determinants of financial development. With regard to this outline, the main objective is to investigate the effect of economic, political and social dimension of institutional quality, as well as the effect of political and macroeconomic factors on financial development. More specifically, the present work aims to contribute to the relevant literature in the following ways: i) in the econometric front, we employ dynamic panel techniques, that allow for heterogeneity among variables, avoiding the known problems of traditional techniques. More specifically, we employ the “system GMM” estimator controlling for endogeneity among variables; ii) we disentangle into economic, political and social institutional quality in order to quantify the effect of institutions on financial development and check the robustness of our results; iii) in the same logic, we decompose our measure of financial openness into equity- and loan-related foreign assets and liabilities in order to assess whether the hoarding of risky vs. riskless assets or the accumulation of equity vs. debt liabilities affect the development of domestic financial institutions; and iv) to control for a potential bias among variables, we include a large set of information, which covers all the spectrum of possible effects on finance, giving emphasis on political factors and government policies. Our main finding from the regression analyses is a robust empirical relationship from institutions to financial development, a result consistent with most empirical studies. Also, we find a stronger effect from economic institutions to banking sector development and from political institutions to stock market development. Regarding the trade and finance link, we find that openness has a much stronger association with bank-based finance than with stock market development. As for financial openness, equity-related assets and liabilities have a more robust impact on financial development. Finally, government policy in terms of less government size and less interest rate controls have a significant effect on the banking sector rather on the stock market sector.*

**Keywords:** Financial development, institutions, trade openness, financial liberalisation, panel data analysis.

**JEL classification:** G29, F19, K49.

### 1. Introduction

In recent years significant researches have been done to identify the question: what are the determinants of financial development? The main findings from this literature can be summarized as follows. First, the degree of a country’s openness, such as capital account openness (Chinn and Ito, 2002; Demirguc-Kunt and Detragiache, 1998) and trade openness (Rajan and Zingales, 2003; Beck et. al., 2001, 2003), helps the development of the financial sector. Second, a country’s institutions, formed by

a country's legal origin (La Porta et al, 1997, 1998; Beck et al 2000, 2003; Djankov et al 2007) or by a country's geography and initial endowment (Acemoglu, Johnson, and Robinson, 2001), affects both creditor rights and private credit, and the extent of creditor rights protection has an independent effect on financial sector development. Third, political economy factors, where the government's position as arbitrator of financial contracts, potential borrower and regulator of the financial system, impacts on the functioning of the financial market (La Porta et al, 1999, 2002; Andrianova et. al., 2008). Finally, macroeconomic factors, such as the level of inflation, impact on financial sector development (Boyd et al, 2001).

Based on these results, our main objective is to investigate the economic, political and social dimension of institutional quality, as well as the effect of political and macroeconomic factors. More specifically: i) we employ the "system GMM" estimator developed by Arellano and Bover (1995), and Blundell and Bond (1998), controlling for endogeneity among variables; ii) we disentangle into economic, political and social institutional quality in order to quantify the effect of institutions on financial development; iii) in the same logic, we decompose our measure of financial openness into equity- and loan-related foreign assets and liabilities in order to assess whether the hoarding of risky vs. riskless assets or the accumulation of equity vs. debt liabilities affect the development of domestic financial institutions; iv) we include a large set of information, which covers all the spectrum of possible effects on finance, giving emphasis on political factors and government policies; and v) in order to investigate the whole impact of institutional changes on financial development, our data consists of 44 countries, for the period 1988-2007.

## 2. Methodology

To assess the relationship between institutions and financial development, the following model is estimated:  $y_{it} = \alpha y_{i,t-1} + \beta x_{i,t-1} + \gamma z_{i,t-1} + \eta_i + \varphi_t + u_{it}$ , where  $y_{it}$  is financial development,  $x_{it}$  is institutions,  $z_{it}$  is a vector of controlling variables including trade openness (TO), financial openness (FO), inflation (INFL), gdp growth (GDP), government size (GOV) and interest rate controls (RATE).  $\gamma$  is a parameter vector.  $\eta$  is an unobserved country-specific time-invariant effect and can be regarded as capturing the combined effect of all omitted variables.  $\varphi_t$  is the time effect.  $u_{it}$  is the transitory disturbance term. The subscripts i and t represent country and time period, respectively.

Arellano and Bond (1991) propose the first-differenced GMM estimator for dynamic panel data models which uses all lagged values of  $y$ ,  $x$  and  $z$  as instruments for  $\Delta y_{i,t-1}$ ,  $\Delta x_{i,t-1}$  and  $\Delta z_{i,t-1}$  in the first-difference equation above. The Arellano-Bover/Blundell-Bond estimator augments Arellano-Bond by making an additional assumption, that first differences of instrument variables are uncorrelated with the fixed effects. This allows the introduction of more instruments, improving efficiency. It builds a system of two equations - the original equation as well as the transformed one - and is known as System GMM. In other words, a "system GMM" estimator enables the lagged first-differences of the series ( $y_{it}$ ,  $x_{it}$ ,  $z_{it}$ ) dated t-1 to be used as instruments for the untransformed equations in levels. Based on the combination of first-difference equations with suitably lagged levels as instruments, and levels equations with suitably lagged first-differences as instruments, the system GMM estimator generally produces more efficient estimates by improving precision and reducing the finite sample bias (Baltagi, 2008).

### 3. Results

In Table 1, we present the results for the stock market. Overall financial openness index (namely FO) is decomposed into equity-related (foreign direct investment and portfolio equity, namely EQUITY) and loan-related (financial derivatives and debt, namely LOAN) assets and liabilities. As expected, financial openness is highly associated with stock market development in all specifications. The coefficients of FO, EQUITY and LOAN for the stock market are 0.076422, 0.2020214 and 0.1019987, respectively. It is noticeable that the impact of EQUITY is greater than of political regime (note that lower values of POL indicating a higher degree of democracy), which at best reaches -0.1672581 (column 3) and of gdp growth (0.0151378, column 2). The other variables, even though they are of the correct sign at most cases, are not statistically significant. In sum, political institutions, financial openness (particularly risky assets and liabilities) and economic performance (measured by gdp growth) are the main determinants of stock market sector development.

**Table 1. Institutions and Stock market**

<i>Dependent variable: Financial Development (stock market)</i>			
<i>Financial Development<sub>t-1</sub> (FD<sub>t-1</sub>)</i>	0.7848774*** (0.0676886)	0.7728131*** (0.0878394)	0.7637571*** (0.0667814)
<i>Economic Institutions (ECON)</i>	0.0661346 (0.121365)	0.0658836 (0.132195)	0.0915555 (0.1212115)
<i>Political Institutions (POL)</i>	-0.1056864** (0.0456062)	-0.0244126 (0.0760781)	-0.1605853*** (0.0572852)
<i>Social Institutions (SOC)</i>	-0.0388421 (0.0249517)	-0.0300839 (0.0276932)	-0.0469797* (0.0253536)
<i>Financial Openness (FO)</i>	0.076422*** (0.0285546)		
<i>Financial Openness (EQUITY)</i>		0.2020214** (0.0803056)	
<i>Financial Openness (LOAN)</i>			0.1019987*** (0.0364487)
<i>Trade Openness (TO)</i>	0.0147206 (0.0651795)	-0.0481047 (0.0790806)	0.05527 (0.0717264)
<i>Inflation (INFL)</i>	-0.0002929 (0.0037942)	-0.0003573 (0.0032164)	-0.0011614 (0.0053329)
<i>Gdp growth (GDP)</i>	0.0131543* (0.0077313)	0.0151378* (0.0080897)	0.0158297 (0.0098225)
<i>Government size (GOV)</i>	-0.0069147 (0.0064002)	-0.0048115 (0.0062632)	-0.0073221 (0.0067911)
<i>Interest Rate Controls (RATE)</i>	0.0109952 (0.0315941)	0.0188127 (0.0341517)	0.0149092 (0.0322638)
<i>Specification tests</i>			
<i>AR(1) test</i>	0.031	0.032	0.032
<i>AR(2) test</i>	0.314	0.314	0.286
<i>Hansen test</i>	0.499	0.322	0.507

Sources: International Country Risk Guide (ECON), Freedom House (POL), Human Rights Dataset - Workers' Rights (SOC), External Wealth of Nations (FO), World Bank World Development Indicators (FD, TO, INFL, GDP), Economic Freedom of the World (GOV), Abiad, Detragiache and Tressel (RATE).

Regressions use 'System GMM' based on the xtabond2 command developed by Roodman (2006) for use with STATA. Robust standard errors are reported in brackets. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% level, respectively. Arellano-Bond test for serial correlation and Hansen test for over-identifying restrictions report p-value.

A different logic prevails in the banking sector (Table 2). Economic institutions are statistically significant in all cases. The coefficients of 0.0588339, 0.0571176 and 0.0658521 indicate the significant role and magnitude of economic institutions in the context of the banking sector development. Even though the banking sector is affected by a wide spectrum of variables, since trade, inflation, government size and interest rate controls are statistically important (note that higher values of RATE and GOV indicating a higher degree of interest rate liberalization and a lower degree of government intervention, respectively), economic institutions seem to have the greater effect. In sum, the results demonstrate that the banking sector is more responsive in changes in economic institutions (rather than in changes in political institutions), trade and macroeconomic policies (inflation), as well as in political choices (government intervention and interest rate controls). Finally, the impact of the lagged value of the dependent variable is significant in all cases, emphasizing the dynamic view of financial development.

**Table 2. Institutions and Banking Sector**

<i>Dependent variable: Financial Development (banking sector)</i>			
<i>Financial Development<sub>-1</sub> (FD<sub>-1</sub>)</i>	0.8463392*** (0.0501344)	0.8609389*** (0.0448038)	0.830649*** (0.0607606)
<i>Economic Institutions (ECON)</i>	0.0588339** (0.0269281)	0.0571176** (0.0249387)	0.0658521** (0.0325821)
<i>Political Institutions (POL)</i>	0.00123 (0.008411)	0.0009763 (0.00793)	0.0002438 (0.0104453)
<i>Social Institutions (SOC)</i>	-0.0012531 (0.0025433)	-0.0010706 (0.0024669)	-0.0010064 (0.0025131)
<i>Financial Openness (FO)</i>	0.0008993 (0.0022653)		
<i>Financial Openness (EQUITY)</i>		0.0003838 (0.0052335)	
<i>Financial Openness (LOAN)</i>			0.0023012 (0.0038165)
<i>Trade Openness (TO)</i>	0.0085662** (0.0042615)	0.0092942* (0.0053566)	0.0099571** (0.0042427)
<i>Inflation (INFL)</i>	-0.000873* (0.0005182)	-0.0008541* (0.0004737)	-0.0008882 (0.0005749)
<i>Gdp growth (GDP)</i>	0.0010314 (0.0006654)	0.0007084 (0.0006944)	0.0010385 (0.0006666)
<i>Government size (GOV)</i>	0.001219* (0.0007457)	0.0010724* (0.0005873)	0.0010386 (0.0008792)

<i>Interest Rate Controls (RATE)</i>	0.0059099** (0.0026582)	0.0048797** (0.0022383)	0.0062893** (0.0029802)
<i>Specification tests</i>			
<i>AR(1) test</i>	0.001	0.001	0.003
<i>AR(2) test</i>	0.251	0.235	0.251
<i>Hansen test</i>	0.705	0.562	0.599

Sources: International Country Risk Guide (ECON), Freedom House (POL), Human Rights Dataset - Workers' Rights (SOC), External Wealth of Nations (FO), World Bank World Development Indicators (FD, TO, INFL, GDP), Economic Freedom of the World (GOV), Abiad, Detragiache and Tressel (RATE).

Regressions use 'System GMM' based on the `xtabond2` command developed by Roodman (2006) for use with STATA. Robust standard errors are reported in brackets. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% level, respectively. Arellano-Bond test for serial correlation and Hansen test for over-identifying restrictions report p-value.

### **Conclusions**

In this paper we construct the new data set on institutions and policies indices for 44 economies from 1988 to 2007. We go beyond the identification of the effects of an overall institutional index and try to provide a more comprehensive assessment of the financial development-institutions-policy links by asking which dimension of institutions (economic, political, social) matter vis-à-vis financial development and whether the effects of institutions and policies differ when the dependent variable differ (stock market or banking sector development).

Our main finding from the regression analyses is a robust empirical relationship from institutions to financial development, a result consistent with most empirical studies. Also, we find a stronger effect from economic institutions to banking sector development and from political institutions to stock market development. Regarding the trade and finance link, we find that openness has a much stronger association with bank-based finance than with stock market development. As for financial openness, equity-related assets and liabilities have a more robust impact on financial development. Finally, government policy in terms of less government intervention and interest rate liberalization have a significant effect on the banking sector rather on the stock market sector.

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# ASPECTS REGARDING THE CURRENT ECONOMIC CRISIS AND ITS INFLUENCE ON THE FINANCIAL SECTOR

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**Abstract:** *The recent global financial and economic crisis has revealed some weaknesses in the regulation and supervision of the financial system and its architecture, especially in the treatment of systemic risks and vulnerabilities, and also the financial implications and downsides of the globalization process. The global nature of financial crisis has highlighted the fact that, although integrated financial markets may offer a number of significant benefits, risks involved are worthy of taking into consideration. In order to ensure the financial stability of the highly integrated global landscape is needed the reform of the financial system architecture, both nationally and internationally.*

**Keywords:** *financial markets, banks, supervision, regulation, financial crises*

**Jel Classification:** *E02, E44, E59, E61, E65*

## **Introduction**

In order to have an efficient answer to the current economic and financial crisis, it is important to understand where and how the crisis started. Although the crisis started as a financial one and later turned into an economic one that influences every aspect of our daily life, we believe that an important part of the answer given to the crisis must address the financial sector thru better regulations and supervision for and from the financial sector triangle: government, financial institutions and corporations. In our paper, using a descriptive methodology based on survey and data interpretation, we are trying to see the factors and the catalysts of the current economic and financial crisis and the figure out a series of improvements that are necessary for an efficient and sound financial system.

## **1. Characteristics of the global financial crisis**

The disruptions relate to the developments in the U.S. mortgage market and, for a better understanding of the transformations suffered, one should make a brief foray into history. Thus, after the 30's crisis, based on the "New Deal" program of the Roosevelt administration, a public body-the Federal National Mortgage Association (Fannie Mae) – was created. Its objective was to increase the volume of loans and mortgages, for stimulating the economy by all the positive effects that the development of the construction sector may have on it. Fannie Mae took over from the initial lenders the default and liquidity risk, which it could manage much better than the first line distributors credits, as it had a portfolio of mortgages much more

diverse and more widespread at the national level than the usual banking institutions. This body could borrow funds itself on longer term than banks, which was likely to reduce the liquidity risk.

This institution exclusively received for discount operations mortgage securities, subject to certain rules. Currently, these rules constitute the referential for defining the so-called *prime loans*, which are actually mortgages of rank one (prime mortgages). At the end of the 60s, the loans contracted by that body in order to refinance its mortgage securities discount operations have come to constitute a significant part of the U.S. government debt. Therefore, in order to relieve the state of the activity of that institution, the Johnson administration reorganized the U.S. mortgage market by creating a new body - the Government National Mortgage Association (Ginnie Mae) - responsible for managing the state guaranteed mortgages, under the scheme for veterans and other social assisted persons.

In 1970, Ginnie Mae began issuing bonds collateralized by mortgage debt, which enabled the transfer of risk of default to the subscribers of such titles and relieve the federal budget of a substantial part of the debt incurred for financing of public programs for the construction of housing. In technical terms, the operation consists of grouping similar mortgages and the issuance, on this basis, of securities (bonds) collateralized by the assets of the issuer. These titles were placed on the capital markets, and their redemption at maturity is done directly from the owners. Also, in 1970, a new body was established, the Federal National Mortgage Corporation (Freddie Mac), to issue securities based on classical mortgage loans, but also to create a competitor to Fannie Mae, which was to be privatized.

## **2. Securitization and the rating agencies**

In time, these institutions were able to mobilize significant capital for mortgage refinancing, their main operations aiming at acquiring and holding assets in prime mortgages, as well as the transformation of mortgage loans in a variety of debt securities collateralized by mortgages. The general name of this operation is securitization, a technique that transforms less liquid financial assets into negotiable securities such as bonds.

Rating agencies, which assess the credit risk related to the transferred assets, had the role to protect the holders of securities and to supervise the administration of the issuers. This risk embodies the risk of nonpayment, late payment, interest payment, etc. If it is considered that a risk is too big for the investors to be interested, there are some techniques used in order to increase the solvability. Entities with unfavorable ratings, through the process of securitization, can refinance at interest rates available for higher ratings. At these kinds of interest rates, they would not have access without this technique. Securitization also provides the opportunity for own funds to be invested in profitable activities, besides the fact that it enables the removal of loans from the balance sheet,

Subject to securitization there can be used mortgages, credit cards, consumer loans, claims on customers, loans to finance investment projects, etc. Securities collateralized by mortgage debt, known generically as "Asset Backed Securities", (ABS), are those securities which are issued based both on packages of residential mortgages and commercial mortgages, but more of them are based on residential mortgages. Mortgages from three sources: a single creditor, multiple creditors, as well as Fannie Mae or Freddie Mac portfolios in the U.S represent the base for most mortgage backed securities (MBS). (Cerna, 2008).

Mortgage securities based on mortgage loans from one lender are usually issued through swap transactions in which the lender changes the package of mortgages for MBS. Mortgage securities backed by multiple creditors allow some creditors to pack mortgages in exchange for the receipt of mortgage securities representing a proportionate part of a larger package. These may include the following titles: mortgage pass-through securities, collateralized mortgage obligation and stripped mortgage-backed securities. Most of the mortgage securities created were mortgage pass-through securities often named mortgage-backed securities (MBS), or participation certificates (PCs). The mortgage pass-through securities represent direct ownership rights on a package of mortgages. They can be wrapped again to create a guarantee for more complex mortgage securities known as collateralized mortgage obligations (CMO). A characteristic of the third category of mortgage securities, stripped mortgage-backed securities (SMBS), is that the cash flow collected on the mortgage base divides into two parts. The channel for the amounts received on the account of the repayment of mortgage loans is the Principal Only securities, while the entire interest paid is allocated to Interest Only securities. Generally, mortgage securities tend to provide coupon rates higher than the treasury securities issued by the U.S. Government. In part, this is because the interest rates charged for mortgages are higher than the interest rates offered by the U.S. government. At the same time, however, the higher interest rates of the mortgage securities also reflect the level of investment risk raised by the uncertainty due to the advance repayments. In the U.S., the GNMA, FNMC and FNMA guarantee these mortgage securities. The mortgage pass-through securities issued and/or guaranteed by the organizations listed above are the most numerous (AAA credit rating).

This structure of the market, based organizations supported by the state, proved to be very profitable, and therefore attracted other financial institutions as well. Thus, if in 2003 the semi-completed 76% of the total issuance of debt securities backed by mortgages and other assets of the issuer, the remaining 24% representing the large financial corporation is on Wall Street, in mid-2006, the share of the semi-public bodies decreased to 43%, while the share of private securities increased to 57% of the total. The major private issuers of this type of securities were the well-known U.S. investment banks (Wells Fargo, Lehman Brothers, Bear Stearns, JP Morgan, Goldman Sachs, and Bank of America) but also the big companies specialized in providing high-risk loans. Parallel with this rapid and radical transformation of the market, there was a change in lending standards in the U.S. following the deregulation process. In this liberal framework, while Fannie Mae and Freddie Mac have continued to provide almost exclusively prime loans, the private corporations have increased their market share, mainly through the securitization of mortgages with high risk and of the so called "Alt-A loans" granted to solvent, but less reliable debtors than the first class customers.

**Table 1:** The increase in the issuance volume of debt securities backed by mortgages (USD billion)

TYPE	2004	Percent	2006	(January- June)	Percent
Prime	57.7	52	67.2		26
With high risk (subprime)	37.4	34	114.3		44

Alt-A	15.8	14	76.5	30
Total	110.8	100	258	100

Source: Goolsbee, 2007:27

However, this increase in the quantity of securities backed by doubtful mortgages created a problem, because the main purchasers of such securities were institutional investors with a limited exposure to the holding of such securities. Consequently, only a small proportion of claims with high risk could be sold to institutional investors in search of higher yields.

To address this issue there was adopted a strategy of dividing risks in more categories or "tranches" with separate administration, thus determining a widening of the market for mortgage debts with high risk. From a technical point of view, this operation consists in dividing the portfolio of claims into two parts: one characterized by a low risk level and, one with high-risk level. To this end, firms on Wall Street have opted for a new financial instrument, created in 1987 by the financial investment firm, Drexel Burnham Lambert, called collateralized debt obligations (CDO).

To understand the operation of risk division, let us assume the existence of a specific portfolio of mortgages with high risk, divided into three classes of risk, with a CDOs issue. At maturity, the issuer redeems (repays) with priority securities of the tranche with the lowest risk (the senior tranche), which contains very secure and safe loans, but which usually carry low interest. After the titles in this tranche have been redeemed, there are withdrawn the titles in the intermediate tranche, with a higher risk, but also a higher yield (the mezzanine tranche). Finally, the titles in the third installment are redeemed only if the titles of the two previous installments have been fully redeemed. Because the titles of the latter class are the first affected by any possible loss in that portfolio of mortgages, they are not listed at the stock exchange, but, given their high risk, they carry the highest yield. In this way approximately 80% of high risk claims are sold to institutional investors, while the rest are sold to hedge funds, to specialized compartments in speculative operations of the firms on Wall Street and other investors attracted by high potential earnings that were provided by such transactions (Bordo, 2007).

An essential difference between CDOs and other mortgage derivatives on one hand, and securities listed at stock exchanges and futures contracts on the other hand, is that the former are not traded on stock exchanges, but on over-the-counter markets (OTC). On these markets, transactions are carried out directly between customers and dealers, unlike the stock market where sale or purchase orders are intermediated, as for the data about the volume of transactions and prices, these are not published officially. The price formation method has no transparency. It should also be noted that there does not exist a supervisory authority for OTC markets, that allows the identification of large or vulnerable exposures, nor do lenders of last resort exist, in order to provide the liquidity needed in special situations.

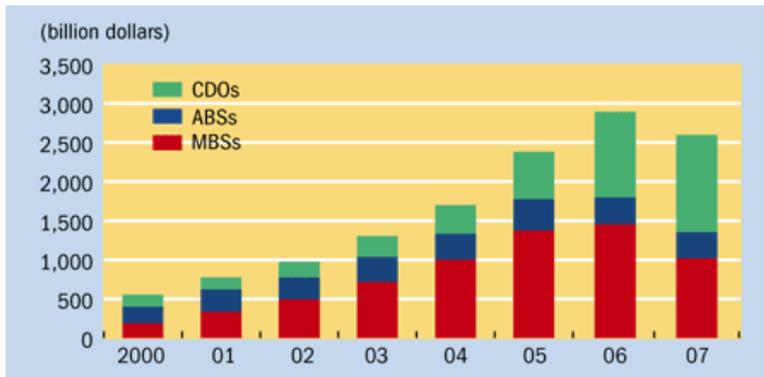


Figure 1 Issuance of structured credit instruments in the U.S.A and Europe  
 Source: Author

Therefore, investors who sought to obtain high profits have ignored the degree of risk involved by such securities. Until the spring of 2007, some top managers of financial companies have begun to concern about debt securities secured by subprime mortgages. However, given the still low interest rates and the high liquidity, the demand for structured credit products with AAA ratings and higher than normal yields, has continued to increase until mid-2007. The demand for real estate in the U.S. has increased considerably in the recent years, which led to a considerable increase in prices, which could be said that have almost doubled and even more from 1997 to 2006-2007.

Price evolution together with the exponential growth of prices after 2000 put the U.S. housing prices in a speculative bubble, the increase being determined by expectations regarding future price increases, rather than by economic foundations. The explanation lies in the fact that the homes were purchased for their future anticipated price level, price that could offset the initial yield offered. On the other hand, this increase was driven by the increased volume of mortgages granted, by the eased access to these credits and by the development of the construction sector in the period of economic prosperity.

In 2005-2006 interest rates began to rise and housing prices to decline moderately in many U.S. regions. As a result, outstanding loans rose as the initial terms have expired and variable interest rates rose. The inability of borrowers to honor the installments of maturing mortgages resulted in the mass start of the sale of properties by property holders and credit institutions. The market was flooded of houses from liquidation of mortgages, while new houses were not sold so well either, which led to a further decrease in the value of homes. Selling these houses below their market value (and obviously the price of acquisition or accepted value of collateral) has increased the default rate of loans and the incapacity to recover the total claims by credit institutions (Bordo, 2007).

The mortgage market crisis actually began when investors with very large debts, such as hedge funds have tried to adjust their exposure or, to exit the losing positions, which made the high-risk mortgage backed securities' market to become illiquid. In this way, in August 2007, when hedge funds had to pay the premiums required by their brokers, had found them stuck on unfavorable positions. The situation has worsened even further, because with the termination of transactions,

there were no market prices any more, to serve as benchmarks, or other means to determine the value of the securities contained in various tranches of risk.

### 3. Vulnerabilities highlighted by the global financial crisis

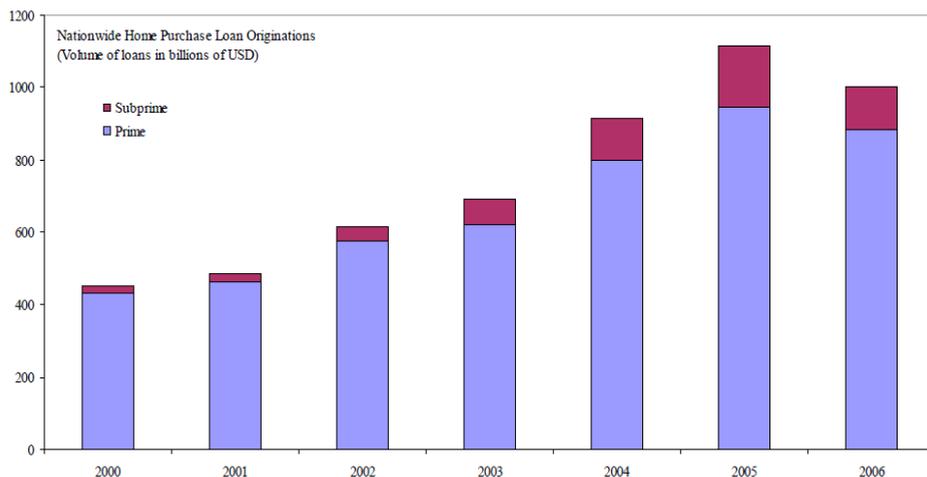
The recent financial crisis, that has stuck the world economy in 2007 and still persists to this day, is a remarkable mix of factors, that have been seen before in a serious of smaller scale financial crisis:

- a) asset prices that have increased to become unsustainable;
- b) credit booms that have increased the debt to new levels unseen before;
- c) the accumulation of systemic risk in the lending process;
- d) the inability of the supervision and regulation to contain the wide spread effects of the crisis.

However, the recent crisis had turned up with new factors that gave it the global magnitude that we are still seeing today:

- e) the widespread use of toxic assets;
  - f) the interconnectivity among the global financial markets;
  - g) the central role that the housing sector played in this crisis, with all its implications.
- Some authors, (Claessens et al 2010) consider that the catalyst of the crisis was the US overloaded housing and mortgage markets, with its increased securitization, and the increasing share of subprime loans within the lending activity between 2000 - 2006

(Figure 3)

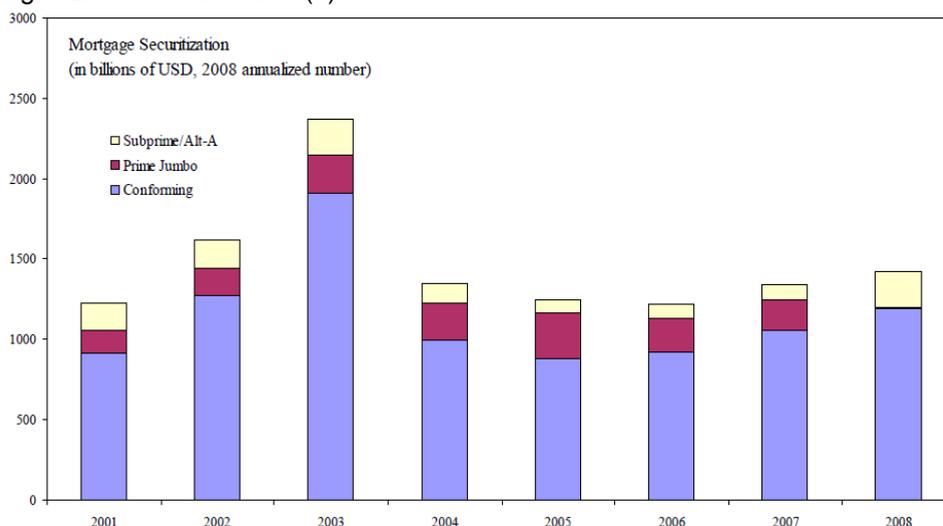


**Figure 3:** Prime and subprime loans

Sources: HMDA, IMF staff estimates.

The subprime loan crisis has affected the entire U.S. financial system and a good part of the international financial markets. The increase in mortgage arrears can be explained, to a large extent, by how smooth and even fraudulent the granting of loans on this market was, together with a key role in creating a framework for easy development and emergence of the crisis played by the process of financial innovation (Figure 4).

Today, the supervisory authorities reassess their financial system supervision framework. Although the wave of reforms in financial system supervision architecture began about 10-15 years ago, in the light of the current crisis, reform of financial system surveillance appears to be imminent. Thus it can be argued that the need for reform stems from the fact that the main objective of monitoring the financial system, found in limiting financial institutions' exposure to risk, is hampered by the esoteric nature of the instruments offered by financial institutions and, on the other hand, the probability of radical change in the degree of exposure. Due to the rapid changes in the risk exposure profile of institutions, the effectiveness of traditional methods of supervision and prudential regulation is significantly reduced. Therefore, the need to reform the process was one of the themes currently discussed by international organizations and forums (1) .



**Figure 4:** Mortgage securitization  
Source: IMF staff estimates

TUAC (2) argues that, in light of current events, there is a need for both increased regulation and supervision of financial markets in order to adapt to the needs of the real economy. Regulatory process should aim to promote responsibility among institutions and markets as well as social protection objectives.

The need for change is felt to provide better coverage through regulation and supervision of international financial markets and to ensure better cooperation between institutions, nationally and internationally, for the early detection of risky behaviors of participants in the national and international financial market. Furthermore, the new framework should address the global financial system's weaknesses that have led to, or have intensified the crisis:

- Unsustainable growth model;
- Accelerating the process of financial innovation that gave rise to an uncontrolled structured finance industry; the risks were not spread out, but concealed, the pace of innovation in this area went beyond the companies' ability to assess risks in derivatives, and the ability of supervisors and regulators to monitor;

- Institutional arbitrage between jurisdictions and financial institutions, which helped to blur the border between the regulated and shadow banking system, allowing financial groups to practice a double accounting, using off-balance sheet transactions, also encouraging irresponsible risk-taking, and investment strategies based on the leverage;
- Prevalence of shareholder value over market integrity and long term interests;
- Poor quality assessment of loans that were transferred to other entities through the process of securitization;
- Lack of supervision of systemic risk - although the increase in indebtedness and the underestimation of credit risk have been identified before the crisis, their magnitude and implications for systemic risk was underestimated. There has also been found a failure in determining the connections between regulated and unregulated market participants;
- Weaknesses in the rating agencies - has seen a very high trust in rating agencies, failure in the models and methodologies used by them, and conflicts of interest in the rating process;
- Procyclical tendencies, fed by the existing regulatory framework and accounting procedures;
- Weaknesses in risk management practices, techniques and models using historical data based on short periods, unsuitable for estimating the likelihood and size distribution of potential losses from credit risk through structured products. More high compensation encouraged excessive risk-taking, without prior analysis of long-term risks;
- Weaknesses in the framework of disseminating information about the risks involved, thus undermining public confidence;
- Inadequate procedures for solving the problems of ailing institutions;
- Lack of transparency in OTC markets.

It is considered essential that regulatory and standardization bodies put efforts to achieve a prudential regulatory framework designed to protect the stability of financial institutions. Feeble regulation and supervision, such as those relating to the underwriting standards in the U.S. mortgage market have aggravated the current crisis, making it essential to strengthen prudential regulation and provision by the individual national regulatory authorities of a first line of defense in preventing imbalances in the financial system. (G-20, 2009)

## **Conclusions**

In our opinion, the consequence of the shown disruptions was that hedge funds stopped their transactions, while the CDO market and the credit related derivatives have virtually ceased to exist. As a result, issuers of CDOs could not place their titles and ceased to issue new ones. Without partners on the secondary market, many initiators of mortgages with high risk have not been able to sell their claims, which put them in a critical situation, given that most of these initial creditors are weakly capitalized, unregulated financial corporations.

Regarding the banks financing the initial lenders, they have ceased their support, which made the latter unable to meet payment obligations related to the stock of mortgage loans granted. Their reaction was ceasing the granting new loans, regardless of their degree of risk, and some of the initiators of mortgages, threatened

by bankruptcy, made requests to postpone the triggering of this procedure - facility provided by U.S. law.

Finally, potential buyers and homeowners could not get mortgages any more, which has put them in the situation of not being able to pay for construction work performed. In turn, constructors, which previously have loans to build homes for sale, could not sell their homes and therefore could, not repay loans, etc.

We consider that all these phenomena have resulted in a strong contraction of demand in the construction of housing, with all the series of negative implications for the economic growth. The fact that those hedge funds and other investors did not buy high-risk mortgage debt any more, has shown that not all these claims were longer considered secure forms of investment, and therefore, buyers of cash receipts (debt securities issued by companies with high solvency) have ceased to buy those titles. Accordingly, securities prices have dropped and their issuers have not been able to procure the necessary funds for the repayment of mortgages and other types of loans they have contracted from big banks and financial corporations. In this way, when the credit resources were exhausted, in the financial system appeared a new request for additional loans.

Hedge funds and other risk seeking investors have also played an important role in the spreading of the crisis' consequences worldwide. Indeed, when the CDO prices fell and investors could not exit the losing positions any more, they began to sell other assets, in particular high yield securities such as shares of companies from countries with emerging market economy, in order to get high enough profits to enable them to cover losses. As a result, the prices of shares have fallen at all stock exchanges in the world and, emerging countries currencies' have depreciated more than was the case in the light of the fundamental economic variables (Cerna, 2008). Taking into account the consequences of these developments, beyond the losses of the U.S. economy, spectacular bankruptcies, causing millions of unemployed and affecting all sectors, another more serious problem appears, namely the repercussions of the U.S. crisis on international financial markets and world economies. The propagation of the crisis effects appears as an unquestioned reality, through a simple fact that, currently, we can no longer speak of an isolated financial crisis in the U.S., but rather of a global financial crisis, which through the implications on the real economy, has become a generalized economic crisis.

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## THE FRAMEWORK RESULTING FROM THE BASEL III REGULATIONS

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**Abstract:** *The banking sector is under prudential regulations set internationally by the Basel Committee, in order to ensure its strength, stability and mitigate competitive inequities. Its founding principle is based on a minimum solvency ratio introduced in 1988 in the form of the Cooke ratio, resulting in a harmonization of the rules of banking supervision governing the level of own funds.*

*Basel II was introduced after the various financial crises of the 1990s (the Mexican crisis of 1994, the Asian crisis, and the Brazilian and Argentinean crisis). Despite a series of reforms, Basel II has quickly shown its limitations with the 2007 crisis that has strongly impacted the financial markets and the world economy generally. In this context, the Basel Committee has developed within Basel III a number of requirements which aim at strengthening the resilience of the banking institutions and financial system. These adjustments will be applied to the three pillars already in place and relate to capital, liquidity and systemic risks.*

*The new Basel provisions relating to the calculation of the numerator of the solvency ratio are declined according to the triptych: strengthening the quality of prudential eligible own funds instruments, increase of the statutory deductions provided by Basel II, and higher minimum thresholds of solvency ratios. Furthermore, a limitation of the lever, calculated from the balance sheet and elements of off-balance sheet based on non-weighted by the risks, will be introduced.*

*The Basel III criteria entering into force between 2013 and 2018 constitute one of the major challenges to which the banking sector will face. The real impact of the Basel III reform will depend on the attitude of the banks that will have to change in their strategy, their cost structure and policy of remuneration of the shareholders. A reform which will have therefore an impact on the world economy ensuring as estimated by Governors and supervisors, stability and long term economic performance. This paper will present the main adjustments proposed by the Basel Committee.*

**Keywords:** *capital requirements; liquidity coverage ratio; leverage ratio.*

**JEL classification:** *G21; G32.*

### Introduction

The new architecture of European financial regulation confirms the need to stem the systemic spread of financial risks by increasing the prudential ratios. The immediate cost of these requirements is offset by the lower occurrence of major crises. The additional costs induced by a strengthening of the liabilities of the banks' capital requirements is not necessarily a strong negative impact on the cost of intermediation.

The recommendations of the Basel Committee, echoed by the G20 countries, modify capital requirements from the Basel II regulations in a logical macro-prudential. The new standards aim on the one hand, to mitigate the procyclicality of previous framework by introducing more flexibility in prudential targets. This is to avoid the liquidation of assets and the sudden restriction credit crisis. They fold, on the other hand, on a narrower equity, less open to hybrid products.

## **1. Equity Capital Strengthening**

There are two ways to avoid a liquidation precipitated asset: either raise own funds in the event of blow, or allow a temporary decline in the prudential ratio. As appropriate to maintain a certain level of own funds at any time, they must be more abundant outside periods of crisis. However the regulatory prudential ratios of own funds were not a real constraint when the crisis because many banks had much higher ratios. The Basel Committee has decided to raise the level of capital called hard (common equity Tier One) strengthening the same time, the quality of capital that constitute and adding a cushion (conservation buffer) additional 2.5% in which banks can draw in case of difficulties. In other words, the target capital is set at 7%, but banks may deviate temporarily in a margin of 2.5%. However some voices, especially in financial circles to consider that these new restrictions will affect the cost of credit and ultimately dampen growth. Others, in contrast, emphasize the incomplete nature of the reforms.

### **1.1. Pillar 1 and Capital Requirements**

The crisis has shown that the risk-weighted capital ratios sometimes give a false idea of the General solidity of banks and it happens the rules of weighting to underestimate the actual risks. Finally, in order to remedy to this problem and to support the requirement of own funds against the risk, Basel III has developed a leverage ratio which should help contain the build-up of systemic risk in the event of rapid development of leverage.

#### **1.1.1. Improvement of Equity Capital Quality and Level**

- *Improvement of equity quality and coherence*

Basel III is intended to improve the quality of equity capital of banking institutions to strengthen their ability to absorb losses (BCBS, 2011). Equity capital is divided into next 3 categories as shows Figure 1. *Tier 1* is decomposed itself into two categories, the Core Tier One (solid core) and Tier One. Core Tier 1 (commonly referred to as Common equity or solid equity) corresponds to the narrower base of equity capital (including capital and reserves). Tier 1 (or basic equity capital) includes capital, reserves and certain hybrid securities (subordinated debts). The new regulation is more restrictive and many hybrid securities should be removed (and integrated in Tier 2) from Tier 1. *Tier 2* (which includes the entire complementary equity capital) was harmonized and incorporates hybrid titles which are not included in Tier 1. *Tier 3*, according equity capital belonging to Tier 3 will be removed from regulatory capital. It is currently used to cover market risks (BCBS, 2011).

- *Equity capital amount increase*

The financial crisis has underlined the need for the banking sector to have a larger volume of equity capital, mainly with reference to Level 1. Basel regulations currently require a minimum Core Tier 1 of 2%, which will be increased to 4.5% by Basel III. Minimum Tier 1 equity ratio has increased from 4% to 6% by Basel III.

Equity capital – Basel III	
Tier 1	<b>Core Tier 1 (Common Equity)</b>
	Capital, retained earnings Gains and losses directly recognized in equity Minority interests when the branch is a bank and according to a cap Treasury shares, intangible assets, goodwill Shareholdings in financial and insurance companies Insufficient provisions in relation to the expected loss Gains or losses from cash flow Miscellaneous
	<b>Lower Tier 1</b>
	Equity instruments able to absorb losses, satisfying certain conditions Instruments of the same nature held in other financial institutions (banks, insurance)
Tier 2	Subordinated loans which have a period of at least five years and which meet certain conditions Instruments of the same nature held in other financial institutions (banks, insurance)

**Figure 1:** Composition of regulatory capital under Basel III

Source: Author based on Moss Adams LLP (2012)

Two additional buffers were introduced to absorb losses during periods of crisis. *Capital conservation buffer:* 2.5%, consisting of Core Tier 1 items. This buffer is designed to ensure that banks can maintain a minimum capital level during an economic recession. *Countercyclical buffer:* 0 – 2.5%. This buffer is introduced at the request of the national regulatory authority to deal with sectorial risks during a period of strong growth of credit. This variable ratio is a function of macroeconomic variables and must consist of Tier 1 capital.

Application of the additional buffer will be communicated to banks with 12 months before entering in force, and its reduction will be applied immediately in order not to penalize credit granting.

A buffer for systemic risk is considered for banks identified as systemic. The level remains to be defined.

**Table 1:** Changes in capital ratios under Basel III

Capital requirement in 2019			
	Core Tier 1 after deduction	Total Tier 1	Total equity capital
Minimum	4.50%	6.00%	8.00%
Conservation buffer (Cb)	2.50%		
Minimum (incl. Cb)	7.00%		
Countercyclical buffer	0 – 2.50%	8.50%	10,50%
Systemic risk buffer	To be defined		

Source: Author based on Moss Adams LLP (2012)

The minimum 8% solvency ratio has increased to 10.5%, including the protection buffer. It corresponds to the sum of Tier 1 and Tier 2 that can be concluded from Table 1 as above.

The Basel Committee has adopted a series of reforms that will strengthen the equity requirements for *counterparty risk*, *market risk*, *systemic risk* and *securitization operations*.

### 1.1.2. Review and strengthening of securitization measures

Securitizations and re-securitizations are also affected by the Basel III reform. In fact, capital requirements will be higher for re-securitization positions with a weight multiplied by 3-4 and a stronger requirement for liquidity positions. On the other hand, it will implement the alignment of capital requirements for securitization positions with a flat-rate charge to reduce regulatory arbitrage between banking and trading portfolios (Lessambo, 2012). Finally, the Committee strengthens the requirements in relation to the information disclosed.

### 1.1.3. A better management of counterparty risk

A review of counterparty risk measurement is initiated with a default exposure calculated by the model of *Effective Expected Positive Exposure* (EEPE). To determine the capital requirement for counterparty risk, the banks must use the highest value of the two models:

- The model of the portfolio level based on the EEPE calculated from current market data.
- The model of the portfolio level based on the EEPE calculated from a stress scenario.

In addition, the Basel Committee has shown the rules of counterparty risk management taking into account the *Wrong Way Risk*, that is, the risk that the exposure to a counterparty to be adversely correlated with its credit quality or, in other words, that the exposure to grow while counterparty credit quality deteriorates. The consideration of the wrong way risk adverse will be translated in an additional capital requirement.

In addition, the market value of the counterparty risk will now be taken into account by *Credit Value Adjustment* (CVA). More specifically, CVA measures the difference between the risk free value of a credit portfolio and the *value at risk* of the same portfolio, i.e. integrating default counterparty risk (AFME, 2012). Capital requirements in relation to CVA will be used to offset potential losses from *marking to market* (MtM) related to the counterparty's default or its credit quality deterioration. CVA takes into account the variability of credit and market spreads (CF, 2010).

$$CVA = \sum_t^T NPV_t Pft - \sum_{t=1}^T \frac{Flows_t Pft}{(1+r+\beta)^t}$$

Where we denote: T = *Maturity*; NPV<sub>t</sub> Pft = *Net Present Value of the portfolio*; Flows = *Flows at date t of the portfolio*; β = *Risk premium*.

Finally, the Committee recommends the use of clearing houses for derivatives to reduce counterparty risk.

#### **1.1.4. Strengthening the measurement of market risk**

The Basel Committee has also introduced a series of reforms for the measurement of market risk in response to the financial crisis of 2007. The 2007 crisis has shown an underestimation of the risk measured by VaR models in times of high volatility. An additional capital requirement associated with a measure of VaR in *crisis conditions* (*Stressed VaR* - sVaR) is necessary to correct VaR pro-cyclicality (BCBS, 2011). Criteria laid down by the Basel Committee for the calculation of Stressed VaR, sVaR, are the following:

- Stressed VaR must be calculated on a weekly basis;
- The confidence level is 99%;
- Minimum detention horizon is 10 working days;
- The observation period shall correspond to a period of significant financial stress in the bank's portfolio.

Basel Committee recommends a VaR calibrated according to shock history for a period of one year in relation to the important losses of 2007/2008.

In terms of impact, Stressed VaR is about 3 times the current VaR. Moreover, an additional „incremental” requirement for specific rate risk for vanilla credit derivatives in the trading portfolio is introduced under the name of Incremental Risk Charge (IRC). This corresponds to an additional risk of default and ratings' migration. IRC is calculated by default scenarios for the bank's trading portfolio, taking into account the historical default probabilities.

Similarly, an additional ”incremental” requirement for specific rate risk of exotic credit derivatives in the correlation based trading portfolio (synthetic CDO and hedging CDS) is introduced essentially under the term of CRM (Comprehensive Risk Measure). CRM aims at measuring default and migration risk (the same methodology as for the calculation of IRC), and the diffusion of CDS spreads and correlation basis, with the possibility of a lower limit ensuring a minimum capital requirement.

#### **1.1.5. Systemic risk consideration**

The Basel Committee includes systemic risk in the center of Basel III project to draw conclusions from the consequences of the bankruptcy of Lehmann Brother on the financial system. In fact, excessive interdependence of systemic banking institutions has equally passed shocks in the financial system and the economy. The Financial Stability Board has published a list of 29 credit institutions deemed “too big to fail”, i.e. too big so that their collapse not to lead automatically to the collapse of the financial system.

European institutions that are part of the list, will need to reinforce their equity capital by 2019 in terms of systemic risk due to the risks that their size or complexity not to press on the international financial system if they would get into difficulties. They will have to allocate a Tier 1 capital ranging from 1% to 2.5% of their assets weighted to the risk they pose to the entire system according to:

- Their size,
- Their interdependence with other institutions,
- The international nature of the institution,

- Their complexity and difficulty of the other institutions to be their substitute in the event of a collapse.

The exact level of this excess requirement will be set in 2014. It will be implemented gradually, starting in 2016, and will be completed in 2019. Among the capital requirements for these 29 financial institutions, the Committee introduces more equity capital requirements to mitigate risks arising from the exposures of major international financial institutions:

- Increased capital requirements for exposures to other players in the financial sector.
- Application of liquidity requirements that penalize excessive recourse to short-term interbank financing to cover assets with long-term maturity. (See the section on the liquidity requirement).
- Increased capital requirements for exposures related to the trading portfolio, derivatives and securitizations, and off-balance sheet exposures.

Finally, the Committee encourages the use of central counterparties for OTC derivative transactions.

### 1.1.6. Leverage ratio

The Basel Committee has introduced a new indicator to reduce the leverage in the banking sector and to cover the modeling risk. Indeed, the crisis has highlighted that many banks have accumulated excessive leverage, while showing solid capital ratios. In times of crisis, these leverage effects have increased the pressures of asset price decrease and have destabilized the financial system. The value of the ratio corresponds to the average monthly leverage ratio per quarter. The minimum requirement of the ratio is 3% of core equity capital (T1). BCBS (2011) will test this minimum Tier 1 leverage ratio of 3% during the parallel run period from 1 January 2013 to 1 January 2017.

$$I_{EL} = \frac{C}{V_{Bt} + Sd_{CDS} + E_B}$$

Where the inputs of this ratio are:  $I_{EL}$  = Leverage ratio;  $C$  = Capital;  $V_{Bt}$  = Total balance sheet before tax;  $Sd_{CDS}$  = CDS balance;  $E_B$  = other off-balance components (To be defined).

## 1.2. Pillar 2 about Risk management and monitoring

The new requirements are structured around the following points: addressing governance and risk management at the level of the institution; taking into account the risk related to off-balance sheet exposures and securitizations; risk concentration management; incentives for better risk management and long-term yields; robust compensation practices; valorization practices; resilience tests; accounting standards applicable to financial instruments; corporate governance; prudential boards and the use of monitoring tools for liquidity control (see below).

## 1.3. Pillar 3 and Market discipline

To enhance market discipline, the Basel Committee also requires improved communication in relation to the trading portfolio and, in particular, in relation to the

perimeter of the complex products, securitization products and the direct responsibility of the off-balance sheet vehicles. The information provided on equity capital will be strengthened. Thus, the Committee introduces a breakdown of assets by economic and geographic sector, as well as an internal rating and allocation system for equity capital impacted by various risks. All equity capital items should be the subject of a statement accompanied by a detailed approach of the accounts published. Eventually the banks will be required to disclose certain remuneration elements and in particular the link between performance and risk-taking by financial institutions.

## **2. Introduction of liquidity management supervisory standards and measures**

The financial crisis has demonstrated the critical role of liquidity in the financial system and the difficulties faced by banks in maintaining their liquidity despite an adequate level of equity capital.

The objective of the Basel Committee is *to introduce harmonized global standards for liquidity* and to ensure that banks have sufficient liquidity to deal with a sudden hypothetical liquidity shock. To this end, the Basel Committee has introduced *two ratios*, the first related to liquidity in the short run, the *Liquidity Coverage Ratio (LCR)*, and the second related to liquidity in the long run, the *Net Stable Funding Ratio (NSFR)*. These two ratios are accompanied by the implementation of monitoring tools which will help supervisors in controlling and maintaining liquidity.

### **2.1. The short term ratio Liquidity Coverage Ratio (up to a month)**

“The Committee has developed the LCR to promote the short-term resilience of the liquidity risk profile of banks by ensuring that they have sufficient HQLA (high-quality liquid assets) to survive a significant stress scenario lasting 30 calendar days” (BCBS, 2013).

$$\frac{\text{High – quality liquid assets}}{\text{Total net cash outflows over the next 30 calendar days}} \geq 100\%$$

The LCR, as above (BCBS, 2010), builds on traditional liquidity “coverage ratio” methodologies used internally by banks to assess exposure to contingent liquidity events. The total net cash outflows for the scenario are to be calculated for 30 calendar days into the future (BCBS, 2010). The standard requires that the value of the ratio be no lower than 100% (i.e. the stock of high-quality liquid assets should at least equal total net cash outflows). This ratio will come into force on January 1, 2015. It is based on the 2007 global financial crisis scenario, including the assumptions of institution’s credit rating downgrading, the partial withdrawal of deposits, the loss of blank interbank funding, significant increase in reductions for financing based on securities.

## 2.2. The long term ratio Net Stable Funding Ratio (up to a year)

$$\frac{\text{Resources for a period greater than one year}}{\text{Required stable funding for a period greater than one year}} \geq 100\%$$

The NSFR is defined as the amount of available amount of stable funding to the amount of required stable funding (BCBS, 2010). Net Stable Funding Ratio (NSFR) is designed, as above ratio (BCBS, 2010), to rectify funding asymmetries and to provide the long-term resources necessary to deal with a liquidity crisis for a one-year period. This ratio will be introduced on January 1, 2018.

### 2.3. Introduction of monitoring tools

The implementation of this ratio is accompanied by the monitoring tools designed to provide a global view on liquidity risk. Thus, a series of five ratios will help create a larger homogeneity of prudential supervision within the liquidity scheme. These metrics capture specific information related to a bank's cash flows, balance sheet structure, available unencumbered collateral and certain market indicators (BCBS, 2010). The lack of liquidity of a bank proves that many long-term assets were funded by borrowing in the short term. More this asymmetry of deadlines is important, most profits are high, and more exposure and refinancing challenges are felt. Also, this phenomenon has failed to lead some actors into a sort of chasm of "illiquidity", potentially leading to insolvency and thus to the bankruptcy. Finally, this flag is designed to communicate the differences between the inputs and outputs contract of liquidity of the balance sheet and off-balance sheet per deadlines.

#### 2.3.1. Contractual maturity mismatch

According to the Basel III framework "the contractual maturity mismatch profile identifies the gaps between the contractual inflows and outflows of liquidity for defined time bands. These maturity gaps indicate how much liquidity a bank would potentially need to raise in each of these time bands if all outflows occurred at the earliest possible date. This metric provides insight into the extent to which the bank relies on maturity transformation under its current contracts" (BCBS, 2010).

#### 2.3.2. Concentration of funding

This ratio is designed to identify interbank funding sources of such importance that the withdrawals could cause liquidity problems. It goes, therefore, in the direction of funding resources' diversification recommended in the Committee's *Sound Principles* (BCBS, 2010).

$$\frac{\text{Funding liabilities sourced from each significant counterparty}}{\text{The bank's balance sheet total}}$$

Significant counterparty means a single counterparty or a group of related counterparties, representing more than 1% of the total balance sheet of the bank (BCBS, 2010).

*Funding liabilities sourced from each significant product/instrument*  
*The bank's balance sheet total*

A “significant product/instrument” means an instrument/product or a group of instruments/products whose total amount is more than 1% of the total balance sheet of the bank. A currency is regarded as “significant” if the total amount of liabilities in that currency is at least 5% of the total liabilities of the bank. The two ratios mentioned above must be reported separately for the following timeframes: less than 1 month; 1-3 months; 3-6 months; 6-12 months; more than 12 months. Finally, banks must make available the list of assets and liabilities stock by significant currency.

### **2.3.3. Available unencumbered assets**

Banks are required to report the amount, type and location of available unencumbered assets that can be mobilized as titles on secondary markets and/or eligible as collateral within the central bank’s permanent facilities. In addition to providing the total amounts available, a bank should report these items (that could serve as collateral for secured borrowing in secondary markets at prearranged or current haircuts at reasonable costs) categorized by significant currency. “A currency is considered “significant” if the aggregate stock of available unencumbered collateral denominated in that currency amounts 5% or more of the associated total amount of available unencumbered collateral (for secondary markets and/or central banks)” (BCBS, 2010).

### **2.3.4. LCR by significant currency**

Regulatory requirements for the short-term liquidity ratio (LCR) are in a single currency, but for liquidity monitoring this ratio must be monitored in each of the major currencies, to better monitor the possible asymmetries of currencies. LCR in currency means (=) reserves of high quality liquid assets in every significant currency / Total net cash outflows\* in each significant currency over a 30-day period (where\*: *after deducting the cost of foreign exchange risk hedging*). A currency is “significant” if total liabilities denominated in the currency in question represent at least 5% of the total liabilities of the bank.

### **2.3.5. Market-related monitoring tools**

The last item in the category of monitoring tools is *market data*. “High frequency market data with little or no time lag can be used as early warning indicators in monitoring potential liquidity difficulties at banks” (BCBS, 2010). The supervisory authority has proposed three levels of information for monitoring and detecting any liquidity problems:

- Market related information (share price, debt markets, currency markets, commodities markets, ratios related to specific tools)
- Financial sector related information (coefficient, stock and bond markets for the financial sector in general and for some of its segments)

- Bank-specific information (the price of its shares, CDSs, the prices negotiated in the money market, the situation of renewals and pricing of its financing with various maturities, price/performance ratio of its obligations and/or subordinated debt on the secondary market).

### 3. In conclusion

Basel III reform is structured around a series of regulatory adjustments and increased capital requirements that we have quickly reviewed in this paper. We can already see that these adjustments will be costly for banks' equity capital and will certainly alter the structure of banks and business lines. These adjustments will be accompanied also by the development of information systems designed to meet regulatory requirements. Finally, the deadline for implementation of Basel III in 2019, the increased capital requirements to channel risk, the uncertainty related to reform implementation in most financial institutions are all elements that we could question and whose effectiveness we are already challenging.

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# TESTING THE LONG RANGE-DEPENDENCE FOR THE CENTRAL EASTERN EUROPEAN AND THE BALKANS STOCK MARKETS

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**Abstract:** *In this study we tested the existence of long memory in the return series for major Central Eastern European and Balkans stock markets, using the following statistical methods: Hurst Exponent, GPH method, Andrews and Guggenberger method, Reisen method, Willinger, Taqqu and Teverovsky method and ARFIMA model. The results obtained are mixed. The Hurst Exponent showed the existence of long memory in all indices, except PX. After applying the GPH method, the results showed that BET, ATHEX, SOFIX and CROBEX have a predictable behavior. The ARFIMA model results support the existence of long memory for BUX, SAX and BELEX. The predictable behavior of index returns may suggest that the CEE and Balkans stock markets are not weak form efficient.*

**Keywords:** *emerging markets, long memory, market efficiency, ARFIMA model*

**JEL Classification:** *C14, C58, G14*

## 1. Introduction

The efficient market hypothesis has major implications for the capital markets, investors behavior and trading strategies. According to Fama (1965) the random walk hypothesis implies that price changes do not have memory, which means that the past cannot be used to predict the future. For this reason, is essential to identify the presence of long memory in index returns, which is manifested through the existence of correlations for high lags. In a case of a shock on the capital market, it will not be assimilated quickly in the course and will pass a longer period of time to reach the equilibrium, which will lead to a higher risk on the market.

In the case that the return series have a long memory, it means that the returns are not independent. In this conditions, the efficient market hypothesis in weak-form is not valid, the return series do not follow a random walk process. The indices have a predictable behavior, which can offer the investors the opportunity to predict the future evolution of index courses using past information for the market and to obtain abnormal profits.

There is a large literature regarding the existence of long memory on the capital markets. A number of studies are carried out for the emerging markets of Central and Eastern Europe. Necula C. and Radu A. (2012) conducted a survey in which

they took into consideration the capital markets from Romania, Hungary, the Czech Republic, Poland, Bulgaria, Slovenia, Slovakia and Croatia. Using non-parametric methods (R/S statistic and GPH method) and ARFIMA-FIGARCH models, the authors concluded that all markets surveyed present long memory in returns, except Slovakia. In another study made by Festic M. et al. (2012) for the Hungarian and Croatian capital markets are used Lo's (1991) modified rescaled range (R/S) test and the wavelet ordinary least squares (WOLS) estimator of Jensen (1999). The R/S test results indicated the possible presence of long memory in Croatia, while there is no evidence against the null hypothesis of long memory in Hungary. The WOLS estimator showed the existence of long memory for CROBEX, while on the other hand, there is no long memory for BUX. However, it is found that there is long memory for some stocks in its composition. Moreover, Kasman S. et al (2009) has tested the existence of long memory for Czech Republic, Hungary, Poland and Slovakia using a semi-parametric method of Geweke Porter Hudak and the parametric method of Sowell. They concluded that all the capital markets analyzed present long memory, except Poland. There are also studies for both long memory in returns and volatility. Kasman A. and Torun E. (2007) examined the existence of long memory for the Turkish capital market during 1988-2007. They used ARFIMA, GARCH, IGARCH, FIGARCH and ARFIMA-FIGARCH models. In order to test the existence of dual long memory, the authors estimated ARFIMA-FIGARCH models, both for normal distributions, and for Student distributions. Long memory coefficients are significant, both for mean and variance, thus showing the presence of dual long memory for Turkish capital market. They found that the models performance that used Student distribution is superior to those models that used normal distribution. Another research for Turkey was conducted by Korkmaz T. et al (2009), taking into account the period 1988-2008. Using the ICSS method proposed by Inclan and Tiao (1994), they identified four structural breaks. The ARFIMA-FIGARCH models signaled the existence of long memory in volatility. Dajcman S. (2012) investigates the long range dependence for eight capital markets in Europe. Unlike other studies, in order to detect the long memory, the author use a dynamic approach. In this sense, the author uses a rolling window method to show that the long memory parameter is variable in time. The results have pointed out that the increase of the long memory parameter coincided with the major financial market disruptions which characterized the capital markets during the period October 1999 – April 2011.

Other studies were developed for Asian capital markets. Maheshchandra J.P. (2012) has analyzed the Indian capital market using daily returns of BSE and NSE during 2008-2011. In order to detect the existence of long memory in volatility are estimated several models: ARMA-GARCH, ARMA-IGARCH, ARMA-FIGARCH. The results highlighted the presence of long memory in the conditional variance. Tan S.H. et al (2009) has analyzed the Malaysian capital market during 1985-2009, taking into account both growth and recession periods, finding the existence of long memory and the possibility of forecasts the courses, especially before the crisis of 1997. Gabjinova et al. (2008) has analyzed two indices: KOSPI1 (Korea 1995-2002) and KOSDAQ1 (Korea, 1997-2004) and six exchange rates EURO, GBP(UK), JPY (Japonia), SGD (Singapore), CHF (Suedia) and AUD (Australia). The possible existence of long memory has been investigated using DTA method (Detrended Fluctuation Analysis) and some models: AR(1), GARCH(1,1) and FIGARCH. As a result, it is concluded that there is insignificant long memory in returns and only the volatility is characterized by long memory.

Further, there are studies for stock markets in Africa. Onour I. (2010) has realized a study for Tunisia, Egypt and Morocco during the period 2002-2006. Using the GPH method and ARFIMA model, it was concluded that this capital markets have short memory. Following the results of FIGARCH model, it was found that the shocks are not likely to persist for long periods on the markets. Boubaker A. and Makram B. (2012) explore the presence of long memory for capital markets in North Africa (Morocco, Egypt and Tunisia), finding that the return distributions can be modeled more adequate through the alpha distribution than by normal distribution. As a result of ARFIMA and FIGARCH models estimations, it was concluded that there is long memory both in returns and volatility.

The South American capital markets have been studied by Assaf A. and Cavalcante J. (2005) which used Lo's (1991) modified rescaled range (R/S) test, V/S statistic proposed by Giraitis et al. (2003), Robinson method and FIGARCH model and signaled the presence of long memory in volatility and a low evidence in returns.

Also, there are studies for groups of emerging and developed countries. Bhattacharya S. N. and Bhattacharya M. (2012) have studied the long memory for ten emerging markets (Hungary, China, Brazil, Chile, Malaysia, Korea, Russia, Mexico, India and Taiwan) during 2005-2011, using the following methods: Hurst-Mandelbrot's Classical R/S statistic, Lo's statistic, GPH method and GPH method modified by Robinson (1995) applied both for absolute and squared returns. The conclusions were that there is a long memory for all countries surveyed, with the exception of Malaysia (the existence of long memory was rejected by Lo's statistical method and by the Robinson method for  $T^{0.65}$ ). Bentes S. and Mendes da Cruz (2009) have analyzed the G7 capital markets from 1999 to 2009. The results have shown the existence of long memory in volatility in Germany, Italy and France, while in Japan it appears to be the least visible and most low intensity. Consider thin trading that characterizes the emerging capital markets, Limam I. (2003) examine the presence of long memory for fourteen capital markets (United Kingdom, Japan, USA, Brazil, India, Mexico and the eight Arab countries) with different degrees of development. By using the GPH and MLE methods and ARFIMA model, the author has detected the existence of short memory for developed capital markets, while the long memory is associated with emerging markets.

The objective of this study is to examine the existence of long memory in returns for nine indices in CEE and the Balkans emerging stock markets: BET (Romania), BUX (Hungary), SAX (Slovakia), PX (Czech Republic), PFTS (Ukraine), BELEX (Serbia), SOFIX (Bulgaria), ATHEX (Greece) and CROBEX (Croatia). The existence of long memory for emerging markets implies that the future evolution of indices is predictable and will influence the investors behavior on these markets. This study comes to rich the financial literature in the field of long memory. Previous studies have focused on the EU emerging markets, but there are quite a few studies that include the Balkans capital markets. Also, in order to check the existence of long memory in return series, this study uses the method proposed by Willinger, Taqu and Teverovski (1999), that has not been used previously in other research carried out for Balkan markets. The paper is organized as follows. Section 2 presents the empirical methods and models used to identify long memory in return series. Section 3 outlines the characteristics of the sample analyzed. Section 4 provides a synthesis of the results obtained. Section 5 concludes.

## 2. Methodology

The statistical methods used in this study for the detection of long memory are: Hurst Exponent estimated by R/S statistics, Hurst Exponent determined by the method proposed by Willinger, Taqqu and Teverovski (1999), Geweke Porter Hudak (1983) method, Andrews and Guggenberger (2003) method, Reisen method (1994) and ARFIMA (1980, 1981) models. Furthermore, will be presented briefly these methods. The Hurst Exponent is determined through the classical R/S analysis, which because of its simplicity is the most popular method used to detect long memory. Let  $X(t)$  be the course of a stock market index at time  $t$  and  $R_t$  the logarithmic return, determined by the equation:

$$R_t = \ln\left(\frac{X_{t+1}}{X_t}\right) \quad (1)$$

The R/S statistic is the range of partial sums of deviations of time series of its mean, rescaled by its standard deviation. It is take into consideration a sample of continuously compounded returns  $\{R_1, R_2, \dots, R_\tau\}$  and let  $\bar{R}_\tau$  denote the sample mean  $\frac{1}{\tau} \sum_{t=1}^{\tau} R_t$ , where  $\tau$  is the period of time considered. The R/S statistic is given by:

$$(R/S)_\tau = \frac{1}{s_\tau} \left[ \max_{t=1}^{\tau} \sum (R_t - \bar{R}_\tau) - \min_{t=1}^{\tau} \sum (R_t - \bar{R}_\tau) \right] \quad (2)$$

where  $s_\tau$  represents the usual standard deviation estimator. Hurst (1951) has shown that the rescaled range, R/S, for many records in time is described by the following equation  $(R/S)_\tau = (\tau/2)^H$  (Cajueiro, D.; Tabak, B., 2004).

Willinger, Taqqu and Teverovsky (1999) proposed a new R/S analysis in determining the long memory, which involves the use of equally weighted returns. It is recommended to use EW series over blocks of size 10 and 20. The authors consider the analysis proposed by Lo accept too easily the null hypothesis of no long-range dependence in the time series. In order to remove the "extra" short-range dependence and isolating hibriden „pure" long-range dependence effects, the authors proposed partitioning of time series into non-overlapping blocks of size  $m$ , e.g.  $m = 10, 20, 50$ , and „shuffle" the observations within each block, so that is a random permutation of the time indices. The effect of such a shuffling experiment is to destroy any particular structure of the autocorrelation function below lag  $m$ , but to leave the high lags essentially unchanged (Willinger, Taqqu, Teverovsky, 1999). In order to estimate the parameter of fractional integration  $d$ , can be used both parametric and semi-parametric methods. In this study the parameter  $d$  is estimated by the Geweke and Porter Hudak (GPH 1983), which is a semi-parametric method. The GPH method is based upon the estimation of the spectral density function, as follows:

$$\ln[I(\lambda_j)] = c - d \ln[4 \sin^2(\lambda_j/2)] + \eta_j, \quad \forall j = 1, \dots, n \quad (3)$$

where:  $\lambda_j = 2\pi j/T$  ( $j = 1, \dots, T-1$ ) represents the harmonic frequencies and

$$I(\lambda_j) = (1/2\pi T) \left| \sum_{t=1}^T e^{i\lambda_j t} (x_t - \bar{x}) \right|^2 \quad (4)$$

is the periodogram  $x_t$  at these frequencies. Considering the number of observations used in the estimation of the regression is:  $n = g(T) = T^\lambda$ , where  $0 < \lambda < 1$  (Kasman, S. et al., 2009). In order to improve the method proposed by Geweke Porter and Hudak (1983), Andrews and Guggenberger (2003) proposed a simple biased-reduced log-periodogram regression estimator,  $\hat{d}_r$ , of a long parameter,  $d$ , that eliminates the first and higher order biases of the GPH (1983) estimator. The bias reduced estimator is the same as the GPH estimator, except that uses additional regressors in the pseudo-regression model that yields the GPH estimator. The reduction in bias is obtained using assumptions on the spectrum only in the neighborhood of the zero frequency. In order to define the biased reduced estimator  $\hat{d}_r$ , it is consider a semiparametric model for a stationary Gaussian long-memory time series  $Y_t; t = 1, \dots, n$  and the spectral density of the time series is given by  $f(\lambda) = |\lambda|^{-2d} g(\lambda)$  (5), where  $d$  is a long-memory parameter,  $g(\cdot)$  is an even function on  $[-\pi, \pi]$  that is continuous at zero with  $0 < g(0) < \infty$  and  $f(\lambda)$  is an integrable over  $(-\pi, \pi)$ . The authors use the regressor  $X_j$ , as in Robinson (1995a). Because the parameter  $d$ , proposed by Geweke and Porter-Hudak (1983) was criticized due to its finite-sample bias, Andrews and Guggenberger (2003) proposed a new bias-reduced log-periodogram estimator  $\hat{d}_r$  of the long-memory parameter  $d$ . The estimator  $\hat{d}_r$  is defined to be the least squares (LS) estimator of the coefficient on  $-2 \log \lambda_j$ , and  $\lambda_j^2, \lambda_j^4, \dots, \lambda_j^{2r}$ , for  $j = 1, \dots, m$ , where  $r$  is a (fixed) nonnegative integer. The authors take  $m$ , such that  $m \rightarrow \infty$  and  $m/n \rightarrow 0$  as  $n \rightarrow \infty$ . When  $r$  is 0, corresponds to the GPH estimator,  $\hat{d}_{GPH}$ . The bias-reduced log-periodogram estimator  $\hat{d}_r$  is defined by:

$$\hat{d}_r = (X^{*'} M_Q X^*)^{-1} X^{*'} M_Q \log I \quad (6),$$

$$\text{where } M_Q = I_m - Q^* (Q^{*'} Q^*)^{-1} Q^{*'}, \quad X^* = X - 1_m \bar{X}, \quad Q^* = Q - 1_m \bar{Q}' \quad (7)$$

represents the deviation from column mean regressor vector  $X^*$ , and matrix  $Q^*$ ,  $\log I, X, Q_k$  denote column  $m$ -vectors whose  $j$ th elements are  $\log I_j, X_j, Q_{k,j}$  and  $Q_{k,j} = \lambda_j^k$ , for  $j = 1, \dots, m$  and  $k = 1, 2, \dots$ ,  $Q$  denote the  $m \times r$  matrix whose  $k$ th column is  $Q_{2k}$  for  $k = 1, \dots, r$  and  $1_m$  denote a column  $m$  vector of ones and  $\bar{X} = \frac{1}{m} X' 1_m, \bar{Q} = \frac{1}{m} Q' 1_m$ . Andrews and Guggenberger recommend the use of

$r = 1, r = 2$  in order to get better results for the biased-reduced log-periodogram estimator,  $\hat{d}_r$ , of a long-memory parameter  $d$  (Andrews and Guggenberger, 2003).

Another method used in this study is that proposed by Reisen (1994). Compared to the method proposed by Geweke Porter and Hudak (1983), there is a replacement of the periodogram function by its smoothing version based on the Parzen lag window. The truncation point in the Parzen lag window is denoted by  $m = T^\beta$ , for  $0 < \beta < 1$  (Reisen, et al., 2006).

Taking into account the studies made by Granger and Joyeaux (1980) and Hosking (1981), an ARFIMA process  $(p, d, q)$  can be expressed as follows:

$$(1 - L)^d \phi(L)x_t = \theta(L)\varepsilon_t, \quad \varepsilon_t \sim iid(0, \sigma_\varepsilon^2) \quad (8)$$

where  $\phi(L); \theta(L)$  are the autoregressive and moving average polynomials of order  $p$  and  $q$ ,  $L$  is lag operator. When parameter  $d$  takes value between  $(-0.5; 0.5)$  the process is stationary and invertible. For  $-0.5 < d < 0$  the series have long-range negative dependence or anti-persistence. For  $0 < d < 0.5$ , the series have long memory, the autocorrelations are positive and decay slowly at a hyperbolic rate. For  $d > 0.5$ , the series is covariance non-stationary, but mean-reverting. If  $|d| > 1$ , the series does not revert to its mean (Kasman, S. et al., 2009).

### 3. Data

In this study, the sample consists daily returns of the nine stock indices for the CEE and the Balkans countries: Romania (BET), Hungary (BUX), Slovakia (SAX), Czech Republic (PX), Ukraine (PFTS), Serbia (BELEX), Bulgaria (SOFIX), Greece (ATHEX), Croatia (CROBEX), during January 2005-November 2012. The daily

logarithmic returns were determined using the following equation:  $r_t = \frac{I_t}{I_{t-1}}$  where

$r_t$  - index return at time  $t$ ,  $I_t, I_{t-1}$  - represents the index prices at time  $t$  and  $t - 1$

. The statistical properties of the indices are provided in Table 1.

Table 1: Descriptive statistics

Index	Mean	Median	Maximum	Minimum	SD	Skewness	Kurtosis	ADF
BET	0.000019	0.00044	0.10564	-0.13116	0.01892	-0.59820	9.27951	-40.566***
BUX	0.000108	0.00032	0.13177	-0.12648	0.01817	-0.07453	8.66019	-33.120***
SAX	-0.00026	0.00000	0.11880	-0.14810	0.01179	-1.63963	29.4877	-46.045***
PX	0.000439	0.00056	0.13856	-0.13466	0.01854	0.11462	11.1150	-24.589***
PFTS	0.000089	0.00085	0.13517	-0.15183	0.01897	-0.31408	11.3544	-32.728***
BELEX	-0.000368	0.00000	4.64918	-4.67282	0.65855	0.00689	20.23822	-18.003***
SOFIX	-0.000322	0.00007	0.07292	-0.11360	0.01383	-0.87362	11.83066	-25.282***
ATHEX	-0.000615	0.00000	0.13431	-0.10214	0.01925	0.04555	6.87466	-42.846***
CROBEX	0.000044	0.00022	0.14779	-0.10763	0.01423	0.04419	16.1925	-22.902***

Source: (Authors' calculations)

Notes: ADF represents Augmented Dickey Fuller (1979) unit root test,  $H_0$ : the series has a unit-root,  $H_1$ : the series is stationary; the lag length was chosen

according to the Schwarz Information Criterion. The critical values for the test with constant are those of MacKinnon (1991): 3.43 (1%), 2.9 (5%), 2.57 (10%), \*\*\*denotes significance at 1%.

The mean returns are positive for Romania, Hungary, Czech Republic and Ukraine. In the case of Slovakia, the mean return is negative. The Balkans capital markets registered negative mean returns, except Croatia. All the capital markets manifested a high volatility, in particular Serbia, which registered the highest standard deviation from the mean returns. The skewness coefficients are negative for Romania, Hungary, Slovakia, Ukraine and Bulgaria, which reflects that there is a tail of the returns distribution to the right, compared to the normal distribution, this because of positive extreme values. Similar results for BET index were obtained by Lazar D. et al. (2009). In the case of Czech Republic, Serbia, Greece and Croatia the skewness coefficients are positive, indicating a greater probability of growth, than decline. The results are in accordance with those obtained by Festic et al. (2012) for Hungary. All kurtosis coefficients register values higher than three, meaning that the returns distribution is more sharp than the normal distribution, indicating leptokurtosis. The results of the Jarque Bera test indicate that the normality hypothesis is rejected for all the markets. The results of the ADF test show that all of the return series are stationary. This characteristics are similar to those obtained by Kasman et al. (2009) for Hungary, Czech Republic and Slovakia.

#### 4. Empirical results

In order to detect the long range dependence the Hurst Exponent, GPH method, Andrews and Guggenberger method, Reisen method, Willinger, Taquq and Teverovski method and ARFIMA model are used. The estimation results are presented in the tables below.

**Table 2:** Tests for long term persistence using the Hurst Exponent and Reisen method

Index	Hurst Exponent-R/S Statistics	Hurst Exponent-R/S with EW returns	Hurst Exponent-R/S with shuffled returns	Reisen Method $\hat{d}$
BET	0.6049	0.5853	0.6675	0.3019*** (0.0553)
BUX	0.5711	0.5852	0.5852	0.2607*** (0.0431)
SAX	0.5967	0.6353	0.5904	0.1729*** (0.0568)
PX	0.4800	0.6314	0.5454	0.3448*** (0.0341)
PFTS	0.6668	0.6568	0.6881	0.2010*** (0.0525)
BELEX	0.5511	0.5952	0.6019	0.2422*** (0.0441)
SOFIX	0.7180	0.6390	0.6796	0.2421 (0.5980)
ATHEX	0.5941	0.5759	0.6283	0.4153*** (0.0333)
CROBEX	0.6624	0.6113	0.6260	0.2884*** (0.0473)

Source: (authors' calculations)

Notes:() standard deviation in parenthesis; EW-equally weighted \*\*\*,\*\*, \* Significant at 1%, 5%, 10% level, respectively.

The Hurst Exponent estimated by R/S analysis, registered values higher than 0.5, indicating the presence of long memory for all the capital markets, except Czech Republic. The return series present long term dependencies and have a predictable behavior. For Czech Republic, the Hurst Exponent is less than 0.5, showing an anti-persistent behavior. In the case of R/S analysis with equally weighted returns, all Hurst Exponents have values higher than 0.5, indicating the existence of long memory for all indices. Also, it has been calculated a Hurst Exponent using the R/S analysis with shuffled returns. In the table above, it can be seen that all indices register values between 0.5 and 1, which indicate a persistent long-term dependence. The results of Reisen method detect the existence of long memory for all indices, except SOFIX.

**Table 3:** Estimation of long memory parameter  $d$  using GPH (1983) and Andrews and Guggenberger (2003) methods

Index	$\hat{d}_{GPH}(r=0)$	$\hat{d}_1(r=1)$	$\hat{d}_2(r=2)$
BET	0.2241** (0.1115)	0.1934 (0.1847)	0.4989** (0.2517)
BUX	0.0853 (0.1136)	0.1475 (0.1847)	0.2170 (0.2517)
SAX	0.2019 (0.1528)	-0.0433 (0.1847)	0.2231 (0.2517)
PX	0.0518 (0.1319)	0.1476 (0.1847)	-0.1288 (0.2517)
PFTS	0.1618 (0.1105)	0.1450 (0.1847)	0.2864 (0.2517)
BELEX	-0.2894*** (0.1027)	0.1206 (0.1905)	0.2778 (0.2605)
SOFIX	0.2878*** (0.0824)	0.3813** (0.1847)	0.3578 (0.2517)
ATHEX	0.1683* (0.0964)	0.2234 (0.1820)	0.3389 (0.2477)
CROBEX	0.2214** (0.0919)	0.3231* (0.1847)	0.3123 (0.2517)

Source: (Authors' calculations)

Notes: The number in parenthesis are the SE, are realized GPH estimates for  $T^{1/2}$  \*\*\*,\*\*, \* Significant at 1%, 5%, 10% level, respectively

The results of GPH method indicate that the fractional differencing parameter estimated values are between 0 and 0.5, which means that BET, SOFIX, ATHEX and CROBEX exhibit long memory. For BELEX, the fractional differencing parameter  $d$  is less than 0, showing an anti-persistent behavior. The results of Andrews and Guggenberger test indicate that the value of long-memory parameter estimated with  $r=1$ , is statistically significant only for SOFIX and CROBEX. For  $r=2$ , the Andrews

and Guggenberger test found presence of long memory only for BET Index. Similar results were obtained by Hiremath,G.and Kamaiah, B. (2011) for Chile and Brazil.

**Table 4:** ARFIMA model (1,d,1) estimates

	BET	BUX	SAX	PX	PFTS	BELEX	SOFIX	ATHEX	CROBE X
d	0.3317* ** (0.0000)	0.3055* ** (0.0000)	0.3639* ** (0.0000)	0.5372* ** (0.0000)	0.2935* ** (0.0000)	0.2858***  (0.0000)	0.3024* ** (0.0000)	0.2886* ** (0.0000)	0.2862* ** (0.0000)
$\phi$	0.5130* ** (0.0000)	0.4935* ** (0.0000)	0.3873* ** (0.0000)	0.3230* ** (0.0000)	0.4342* ** (0.0000)	0.3489***  (0.0000)	0.4710* ** (0.0000)	0.3949* ** (0.0000)	0.2934* * (0.0194)
$\theta$	- 0.7203* ** (0.0000)	- 0.7407* ** (0.0000)	- 0.6842* ** (0.0000)	- 0.8215* ** (0.0000)	- 0.5836* ** (0.0000)	- 0.6724***  (0.0000)	- 0.5766* ** (0.0000)	- 0.6506* ** (0.0000)	- 3.2686* ** (0.0011)
Q(10 )	4.305 (0.9326)	13.224 (0.2114)	10.799 (0.3733)	10.237 (0.4199)	2.832 (0.9851)	34.173*** (0.000)	5.469 (0.8577)	2.213 (0.9944)	3.497 (0.9671)
Q(20 )	16.126 (0.7088)	21.314 (0.3789)	21.000 (0.3971)	21.722 (0.3558)	9.702 (0.9733)	67.199*** (0.000)	20.932 (0.4011)	11.508 (0.9319)	21.478 (0.3694)
Q(30 )	24.709 (0.7391)	44.399* * (0.0438)	34.056 (0.2786)	34.319 (0.2682)	22.864 (0.8208)	82.104*** (0.000)	30.565 (0.4370)	20.562 (0.9010)	28.206 (0.5595)
Q(40 )	43.152 (0.3381)	5.285* (0.0546)	54.490* (0.0630)	53.483* (0.0752)	34.709 (0.7070)	113.718* ** (0.0000)	40.811 (0.4346)	37.141 (0.5996)	44.312 (0.2947)

Source: (authors' calculations)

Notes: \*\*\*,\*\*,\* Significant at 1%, 5%, 10% level, respectively; Q() – Ljung Box statistics

In the table above, it can be seen that the value of the parameter d is significant at a confidence level of 1%

for all indices. For all indices, except PX, the parameter  $d$  takes values between  $0 < d < 0.5$ , implying that the series have long memory, autocorrelations are positive and hyperbolic decline toward zero. Long memory refers to the fact that stock prices have a predictable behavior, showing that these capital markets are not weak-form efficient. Similar results in financial literature were obtained by Kasman and Torun (2007) for another emerging market, Turkey. So, ARFIMA models can be used by investors to predict returns and thus have the possibility of obtaining abnormal earnings. For PX, the estimated value of parameter  $d$  is higher than 0.5, which means that the process is mean-reverting, since there is no long term impact of the innovation variance on the process future values.

**Table 5:** ARFIMA model (1,d,1) estimates using Willinger, Taqqu and Teverovsky (1999) method

	BET	BUX	SAX	PX	PFTS	BELEX	SOFIX	ATHEX	CROBEX
H	0.5781** * (0.0000)	0.5377* ** (0.0000)	0.5881** * (0.0000)	0.3204** * (0.0000)	0.6526** * (0.0000)	0.4348 *** (0.0000)	0.5893** * (0.0000)	0.6966*** (0.0000)	0.5464** * (0.0000)
$\phi$	0.1484 (0.2191)	0.1695 (0.2990)	0.4697** * (0.0042)	0.6388** * (0.0000)	0.2912 (0.2835)	0.6545 *** (0.0000)	0.1173** (0.0190)	0.5665*** (0.0000)	0.4243** * (0.0000)
$\theta$	- 0.3132** (0.0269)	-0.2919 (0.1140)	- 0.5394** * (0.0018)	- 0.4769** * (0.0000)	-0.3199 (0.2551)	- 0.6288 *** (0.0000)	- 0.1228** (0.0141)	- 0.7444*** (0.0000)	- 0.4561** * (0.0000)
IV	0.00012 9*** (0.0000)	0.0000 97 (0.0000)	0.00005 4*** (0.0000)	0.00010 6 (0.0000)	0.00011 5*** (0.0000)	0.1708 *** (0.0000)	0.00006 7*** (0.0000)	0.000115 *** (0.0000)	0.00006 7*** (0.0000)
EW=10									
H	0.5642** * (0.0000)	0.4991* ** (0.0016)	0.6064** * (0.0000)	0.3224** * (0.0002)	0.5481** * (0.0000)	0.3449 *** (0.0000)	0.7874** * (0.0000)	0.6944*** (0.0000)	0.7004** * (0.0000)
IV	0.00034 4*** (0.0000)	0.0002 8 (0.0000)	0.00015 7*** (0.0000)	0.00031 3*** (0.0000)	0.00063 5 (0.0000)	0.3827 *** (0.0000)	0.00026 7*** (0.0000)	0.000317 *** (0.0000)	0.00016* ** (0.0000)
EW=20									
H	0.6461** (0.0223)	0.4946 (0.2558)	0.5895* (0.0546)	0.3583* (0.0534)	0.4599** * (0.0000)	0.4788 * (0.1268)	0.5855** * (0.0000)	0.7208*** (0.0000)	0.6948** * (0.0113)
IV	0.00078 0*** (0.0000)	0.0005 87* (0.0696)	0.00037 0*** (0.0000)	0.00044 5** (0.0303)	0.00126 2 (0.0000)	0.5576 (0.0000)	0.00087 2*** (0.0000)	0.000777 *** (0.0000)	0.00035 9*** (0.0000)

Source: (authors' calculations)

Notes: IV – innovation variance; EW – returns equally weighted; \*\*\*, \*\*, \* Significant at 1%, 5%, 10% level, respectively.

According to the results presented in Table 5, when EW series over blocks of size 10 are used, the Hurst Exponents record values higher than 0.5 for BET, SAX, PFTS, SOFIX, ATHEX and CROBEX, indicating a long term dependence in return series. On the other hand, in the case of BUX, PX and BELEX, the return series are anti persistent, which means that the performances from the past will change in the future. Similar results are obtained for blocks of 20 observations, except for the PFTS Index, in which case we obtain a Hurst Exponent <0.5.

## 5. Conclusions

Analyzing the existence of long memory in return series for nine indices from Central Eastern European (Romania, Hungary, Slovakia, Czech Republic, Ukraine) and Balkan emerging markets (Serbia, Bulgaria, Greece, Croatia) we have found mixed results depending on the statistical methods that are used. The Hurst Exponent estimated by classical R/S analysis, indicates the presence of long memory for all indices, except PX. According with the results obtained by GPH method, the return series for BET, ATHEX, SOFIX and CROBEX exhibits long memory, while the return

series for BELEX Index is anti-persistent. The results of Andrews and Guggenberger test are similar to those obtained by GPH method in the case of BET, SOFIX and CROBEX. Using Reisen method, we have found that SOFIX exhibits short memory. The results provided by Willinger, Taqqu and Teverovsky method, indicate a long range dependence for BET, SAX, PFTS, SOFIX, ATHEX and CROBEX. According with ARFIMA model estimates, all indices, except PX, have a predictable behavior, the investors can obtain abnormal profits, suggesting that these capital markets are not weak-form efficient.

As direction of future research is recommended the analysis of long memory in volatility of these indices, the detection of the structural breaks and the estimation of GARCH models for modeling volatility. It also should be investigated the causes that lead to the appearance of various degrees of predictability of returns and volatility and their impact on the construction of portfolios and trading strategies of investors.

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## COMPARATIVE ANALYSIS OF THE BANK'S CAPITAL ADEQUACY ACCORDING TO THE BASEL AGREEMENT

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**Abstract:** *The present article has as a research field the theoretical, methodological and practical aspects of the capital bank adequacy mechanism, according to Basel Agreement. In this paper we intend to present the advanced approaches of measurement and the minimum requirements regarding the bank capital. The objectives of the research theme, presented in this paper, are oriented mainly towards: presenting the principles and rules which governance the bank capital adequacy mechanism; calculation and comparison of the bank capital adequacy indicators. An objective that we consider needs to be mentioned is the reflection of the modifications which will affect the bank environment in the next years, as a result of adopting the new General Frame of Bank Supervision. Even though the actual stage of research is advanced, in the Romanian and foreign literature, which dedicates a lot of theoretical and empiric studies of the bank capital adequacy mechanism, in this moment, the international crises pointed out the purpose and the implications of the credit institutions within the financial system. In our paper we will use a theoretical and a practical research. The theoretical research describes the laws, rules of application in the banking field in our country. In the practical research we will use as a research method, the quality-comparative analyses, by presenting details regarding the bank capital adequacy indicators. Within the study methodology, we will use the available channels in order to structure in an useful way the research by: description, explanation, exemplification, simulation, comparative. Within the approached channels we mention: reading, analyzing information, research on specialty sites, discussions in the professional groups, discussions with the top managers of the bank, explanation, induction and deduction, conclusion and supporting our own opinion. Among the complicated, difficult, urgent problems of the European integration, within globalization and change, in the foreground we have the state of the economy, the economic problems, situation of the banking system. In Romania there is now a modern and competitive banking system, which provides circulation of the economy and domestic supplies banking products and services in accordance with trends in the European banking sector. In this way, the action line, I did a comparative study determining capital requirements under Basel 1, Basel 2, the standardized approaches, credit risk determined. Capitalization of Romanian bank's remain comfortable, providing good conditions for meeting additional capital requirements Basel III. In what concerns the capital adequacy management, the leading structures of a credit institution need to establish strategies and effective policies in order to maintain, on a continuous base, a level, a correct structure of their own funds, proper for covering the risks that the credit institution is exposed to. We conclude that a bank needs to increase its own funds, which is achieved by several methods decided by management. Presentation of concrete cases in approaching the bank's capital adequacy represent the personal work which completes the study concerning the purpose of back-up accounting in the banking system, adequate correlation of the risks and capitals.*

**Keywords:** *Bank's Capital Adequacy; Weighted Assets; Own Funds; Solvency; Accord Basel, Comparative Analysis*

**JEL Classifications:** *G21*

## **1. Generally Introduction**

The present article aims to reflect that the current global financial turmoil continues to pose a threat to the effectiveness of the Accord Basel rules which are aimed at achieving global financial stability. This study presents the common problems of the credit institutions, introducing theoretical aspects and also practical aspects of applying a model and of interpreting risk situations, considering the attempts of alignment of the Romanian banking system to the requests of the European Union, materialized in the stipulations of Basel Accord. Considering the scientific research methodology, the following issues were set: introduction, motivation, importance and scientific research methodology, objectives, development of the article, estimated scientific results. In the introduction is being argued the research theme, the necessity and the importance of it. In the present economic-financial context, the fluid character which often brings major differences of opinion. The motivation of choosing the research theme is formulated and further the used research methodology is being presented. In the scientific research methodology, there are presented the scientific research areas, the field and the objectives of the scientific research, and also its structure. The present research is based on a deductive approach - strictly qualitative. For analyzing all the data I used the following research methods: comparative method, document analysis, external observation. I choose this subject for scientific reasons and realistic reasons. I consider that Romania's chances, on the road to the European integration in globalization, firstly depend on its own performance, the quality of management at all levels. Romania's efficient integration within the above mentioned context cannot be achieved otherwise than through a performance superior to that already existing. The necessary performance can be achieved only with an advanced, new, modern management, with good results of own funds in the banking system. The objectives of this study are determining capital requirements under Basel Accord I, Basel Accord II, Basel Accord III the standardized approaches, credit risk and interpretation of this evolution in the banking system. Imposing minimum capital adequacy regulations is one way of fostering stability in the global banking system.

## **2. Literature review**

Even though the stage of research in this field is advanced, in both Romanian and foreign literature, which dedicate a lot of theoretical and empiric studies to bank's capital adequacy mechanism, in this moment the international crises pointed out the purpose and implications of credit institutions in the financial field. We want, in the allocated space, based on those already presented, to refer to the „capital adequacy in the banking system”. Referring to the literature in the field, a very useful starting for our research is the series of papers developed under BIS (Bank for International Settlements).The BIS carries out research and analysis to contribute to the understanding of issues of core interest to the central bank community, to assist the

organisation of meetings of Governors and other central bank officials and to provide analytical support to the activities of the various Basel-based committees. The BIS also comments on global economic and financial developments and identifies issues that are of common interest to central banks. The research agenda of the BIS is focused on key areas of interest to central banks, such as monetary and financial stability, monetary policy and exchange rates, financial institutions and infrastructure, financial markets, central bank governance, and legal issues. The National Bank of Romania offers to its users, information's regarding the determining capital requirements under Basel Accord I, Basel Accord II, Basel Accord III the standardized approaches, credit risk, through the Reports of Financial Stability and the Annual Reports. I have been used due to their importance, new character and desire to be largely and deeper known and especially used in the scientific research and in the practical activity.

### **3. Research design and methodology**

Considering the scientific research methodology, the following issues were set: introduction, motivation, importance and scientific research methodology, objectives, development of the article, estimated scientific results. In the introduction is being argued the research theme, the necessity and the importance of it. The motivation of choosing the research theme is formulated and further the used research methodology is being presented. In the scientific research methodology, there are presented the scientific research areas, the field and the objectives of the scientific research, and also its structure. The present research is based on a deductive approach - strictly qualitative. For analyzing all the data I used the following research methods: comparative method, document analysis, external observation. I choose this subject for scientific reasons and realistic reasons. I consider that Romania's chances, on the road to the European integration in globalization, firstly depend on its own performance, the quality of management at all levels. Imposing minimum capital adequacy regulations is one way of fostering stability in the global banking system. Romania's efficient integration within the above mentioned context cannot be achieved otherwise than through a performance superior to that already existing. The necessary performance can be achieved only with an advanced, new, modern management, with good results of determining capital requirements under Basel I, Basel II, Basel III the standardized approaches, credit risk determined in the banking system. I consider that bank's capital levels should be regulated to enhance global financial stability.

The objectives of this study are presentation of concrete cases in approaching the capital bank's adequacy represent the personal work which complets the study concerning the purpose of back-up accounting in the banking system, adequate correlation of the risks and capitals, evolution of the capital requirements and interpretation of this evolution of in the banking system. For analysis of national or international data, we used comparative longitudinal research method (showing the evolution of bank's capital adequacy according to Basel I, Basel II and Basel III).

## **4. Results and discussions**

### **4.1. Capital requirements under Basel Accord III**

Basel Accord III is a comprehensive set of reform measures, developed by the Basel Committee on Banking Supervision, to strengthen the regulation, supervision and risk management of the banking sector. The reforms target:

-Bank-level, or micro-prudential, regulation, which will help raise the resilience of individual banking institutions to periods of stress.

-Macro-prudential, system wide risks that can build up across the banking sector as well as the pro-cyclical amplification of these risks over time.

These two approaches to supervision are complementary as greater resilience at the individual bank level reduces the risk of system wide shocks.

Micro-prudential regulatory measures CRD IV are the following three:

a) Strengthening the regulatory capital requirements to increase capacity to absorb further losses under / cessation of business by:

- Removing inconsistencies in the definition of capital
- Identifying eligible items comprising the capital and their relative level of risks taken by credit institutions by establishing the responsibility of shareholders to increased capital requirements, namely:
  - Increase the minimum equity requirement (common shares, share premium, retained earnings and reserves) from 2% to 4.5%
  - Increasing the Minimum Tier 1 (equity and hybrid instruments) from 4% to 6%.
  - Although total capital requirement of 8% stayed structure is unchanged in meaning:
  - Increase the share of equity (or shareholders effort to total own funds) and, respectively,
  - Decrease weight Tier 2 (subordinated debt) to those of level 1 - 100% as it is now at 33%.

b) The introduction of new prudential ratios

c) Establishment of capital buffers. In the first period (until 2016) the change in the structure of total of own funds by increasing equity. From 2016 until 2019 occurs progressively establishing the damper fixed capital conservation to be achieved as presented in equity elements (based on effort shareholders).

d) Recognition diminished role of central counterparty credit risk by reducing capital requirements for exposures to such entities

e) Increased capital requirements for OTC transactions settled through a central counterparty

f) Maintain current level of positive discrimination SME sector (75% risk weight for SMEs to 100% risk weight to corporates) as a stimulus for its development

g) Remuneration

h) Corporate Governance.

These measures aim to:

-improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source

- improve risk management and governance

- strengthen banks' transparency and disclosures.

#### 4.2. The evolution of own funds in the X-Bank

a) In order to determine minimum capital requirements for credit risk under Basel III, according application standard approach we leave the X-Bank balance of 2011, highlighted the beginning case study. X-Bank's own funds at 31 December 2010 and 31 December 2011, broken down into their components and is as follows:

**Table no.1:** X-Bank's Own Funds at 31 December 2010 and 31 December calculated according to Basel Accord III

<b>Own funds - in RON -</b>	<b>31 December 2010</b>	<b>31 December 2011</b>
Subscribed and paid up share capital	2.352.000	2.837.000
Share premium	-	2.000
Eligible Reserves *	848.000	580.000
Intangible assets	75.000	110.000
50 % of the shares and other equity securities held in other credit and financial institutions in excess of 10% of their share capital	84.000	36.000
50% of holdings in insurance companies, reinsurance companies	-	-
Own shares redeemed	-	-
<b>Total Tier I</b>	<b>3.359.000</b>	<b>3.565.000</b>
Revaluation reserve	50.000	48.000
Subordinated loans	247.000	123.000
50% of the shares and other equity securities held in other credit and financial institutions in excess of 10% of their share capital	-84.000	-36.000
50% of holdings in insurance companies, reinsurance companies	-	-
<b>Total Tier II</b>	<b>213.000</b>	<b>135.000</b>
<b>Total equity</b>	<b>3.572.000</b>	<b>3.700.000</b>

(Source: author based on archive of The National Bank of Romania)

b) Such X-Bank assets will have the following degrees of risk:

**Table no. 2:** The Weighted Assets of the X-Bank calculated according to Basel III

1. 2. Cash, deposits with central banks <b>APRCASH</b> = CASH*0% = 5000.000*0% = 0 u.m. <b>APRDBC</b> = DBC*0% = 2.218.000*0% = 0 u.m
3. Bills and other bills eligible for refinancing with central banks (government bonds) <b>APREPA</b> = EPA*0% = 8.410.000*0% = 0 u.m.
4. Claims on credit institutions (maturity of up to 3 months) <b>APRCIC</b> = CIC*20% = 994.000*20% = 198.800
5. Claims on customers

<p><b>APRCC = CC*100% + CC*75% + CC*35%, so:</b>  CC loans to companies – 100%,  To individual-consumer loans - 75%,  To individual-guarantees property - 35%</p> <p>(Credit-provision) x risk weight =  0.000.000*100%+5.000.000*75%+7.101.000*35% = 10.000.000</p>
<p>6. Bonds and other fixed income securities (municipal)  <b>APROA = OA*20% = 915.000*20% = 183.000</b></p>
<p>7. Shares and other variable income securities (the company)  <b>APRAAV= AAV*100% = 221.000*100% = 221.000</b></p>
<p>8. Participating credit institutions - are not in stock X-Bank</p>
<p>9. Parties associated companies, f which:  - Parts in credit institutions (with residual maturity greater than 3 months)  <b>APRPIC = PIC*50% = 195.000*50% = 97.500</b></p>
<p>10. Intangibles' Assets  <b>APRIN = IND*0% + INN*100% = 110.000*0% = 0</b>, where:  IND is deducted from the own funds  INN is no deducted from own funds</p>
<p>11. Tangible Assets  <b>APRIC = IC*100% = 434.000*100% = 434.000</b></p>
<p>12. Unsubscribed and paid up share capital  <b>APRCSN = CSN*0% = 0</b></p>
<p>13. Other Assets  <b>APRAA = AA*100% = 93.000*100% = 93.000</b></p>
<p>14. Prepaid expenses and accrued income  <b>APRCVAV= CAV*100%=494.000*100%=494.000</b></p>

(Source: author based on archive of The National Bank of Romania))

c) Total credit risk-weighted assets = 0 u.m.+ 0 u.m.+ 0 u.m.+ 0 u.m.+ 22.101.000 u.m. +183.000 u.m.+221.000 u.m.+195.000 u.m.+0 u.m. +434.000 u.m +0 u.m +93.000 u.m +247.000 u.m. = 23.474.000 u.m.

d) Solvency ratio must be at least 12% so

e)  $12\% * \text{Average risk own funds} \leftrightarrow \leq 12\% * 23474000 \text{ um} = 2,816,880 \text{ u.m.} \leq 3,700,000 \text{ u.m.}$

The solvency ratio has the value:  $\text{Own funds} / \text{Total credit risk-weighted assets} * 100 = 3.700.000 / 23.474.000 * 100 = 15,76\%$

**Table no. 3:** Comparative Analysis of Capital Requirements under Basel I, Basel II, Basel III - (the Years of references 2011)

Capital requirements Basel I Basel II Basel III	Basel I	Basel II	Basel III
Capital requirements for credit risk, counterparty credit risk, the risk of dilution and incomplete transactions	2.471.980	3.088.875	3.294.800
Capital requirements for position risk, foreign exchange risk and commodities risk	132.000	132.500	133.000

Capital requirements for operational risk	1.444.050	1.447.050	1.500.000
<b>Total requirements of capital</b>	<b>4.048.030</b>	<b>4.668.425</b>	<b>4.927.800</b>

(Source: author based on archive of The National Bank of Romania)

Analysis comparative of capital requirements calculated under the three agreements Basel reflect the fact that:

Capital requirement under Basel I < capital requirement under Basel II < capital requirement under Basel III.

Thus the need for capitalization of banks is increasingly bet on increasing. We will need to adopt new models asset management, balance sheet size will be bet on the determinate of all funds that the bank may increase (liabilities) and total assets will be adjusted to equal the liabilities available. Also we believe that the bank will be necessary to grow up tier one level from 2% to 7% in 2019. Another important element is to avoid future bottlenecks to request bank to possible growth and create liquid assets from various sources, such as the exchange of bills or other debt instruments. Although total capital requirement of 8% stayed structure is unchanged in meaning: increase the share capital (shareholders effort to total own funds) and, respectively, lower weight Tier 2 (subordinated debt) to of the level 1 to 100% as it is now at 33%. It should be noted that along with measures surveillance and efforts to increase the share capital to shareholders, a contribution to maintaining a high level of solvency ratio had substantial stock of government securities existing bank balance, characterized by a low risk and high liquidity, with a direct impact on capital requirements. However the presence of excess of these elements can adversely affect operational efficiency as a result of debt levels attached to the existence of a much smaller share of loans to the real sector. The completion of these requirements solicit eligible participants more capital.

## 5. In conclusion

Since the recent crisis, stress testing and reverse testing have become integral tools in managements of banks'. Liquidity management and compliance is central to Basel Accord III. It is placing new demands on financial institutions as well as providing new opportunities. Accepting a higher risk level by credit institutions means strengthening the level of own funds, even over the level stipulated by the bank. Capital adequacy is prominent feature in the management of any risks encountered by the credit institution. The credit institutions should manage the inherent risks. The very efficient management of risk it is essential for the success on long term of any bank. We want to mention and express our opinion that the methods and techniques of managing risk, calculation of capital need permanent revision and adaptation to the changes that take place on the financial market the appearance of Basel Accord III, which are absolutely necessary in the actual economic and financial context. Implementing Basel III is a significant challenge for any bank. The key issues are deciding how best to implement a solution that allows them to comply, how to streamline their systems and processes for improved operational effectiveness and how to reduce their capital requirements.

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# A MACROPRUDENTIAL SUPERVISION MODEL. EMPIRICAL EVIDENCE FROM THE CENTRAL AND EASTERN EUROPEAN BANKING SYSTEM

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**Abstract:** *One of the positive effects of the financial crises is the increasing concern of the supervisors regarding the financial system's stability. There is a need to strengthen the links between different financial components of the financial system and the macroeconomic environment. Banking systems that have an adequate capitalization and liquidity level may face easier economic and financial shocks. The purpose of this empirical study is to identify the main determinants of the banking system's stability and soundness in the Central and Eastern Europe countries. We assess the impact of different macroeconomic variables on the quality of capital and liquidity conditions and examine the behaviour of these financial stability indicators, by analyzing a sample of 10 banking systems during 2000-2011. The availability of banking capital signals the banking system's resiliency to shocks. Capital adequacy ratio is the main indicator used to assess the banking fragility. One of the causes of the 2008-2009 financial crisis was the lack of liquidity in the banking system which led to the collapse of several banking institutions and macroeconomic imbalances. Given the importance of liquidity for the banking system, we propose several models in order to determine the macroeconomic variables that have a significant influence on the liquid reserves to total assets ratio. We found evidence that GDP growth, inflation, domestic credit to private sector, as well as the money and quasi money aggregate indicator have significant impact on the banking stability. The empirical regression confirms the high level of interdependence of the real sector with the financial-banking sector. Also, they prove the necessity for an effective macro prudential supervision at country level which enables the supervisory authorities to have an adequate control over the macro prudential indicators and to take appropriate decisions at the right time.*

**Key words:** *banking supervision; macro prudential monitoring; risk; bank liquidity; bank capital adequacy, financial stability*

**JEL classification:** *E44; G01; G32*

## 1. Introduction

In the recent years, the banking sector has experienced various crises at national, regional or international level. One of the positive effects of these crises is the increasing concern of the supervisors regarding the financial system stability. The onset of a financial crisis has always been difficult to predict, but there are some signals that indicate financial vulnerabilities in the banking system. These enable policy formulation and implementation of tools for the prevention and mitigation of financial imbalances.

Schou-Zibell, Albert and Song (2010) have highlighted the need to strengthen the links between different financial components of the financial system. Excessive risk-taking combined with weak prudential supervisory framework and reckless monetary policies are considered the major roots of the financial crisis. If risks are well managed, the banking institutions can lead to prosperity, but if we consider the macro level of all banks from the system, we must take into account the overwhelming role of central banks and regulators.

The identification by supervisors of properly risk managed banks turned to be a difficult task. Prudential supervision should not be focused only on individual banks. It should have a macro prudential perspective that examines the risk distribution within the financial system in time and also the negative externalities.

The purpose of this empirical study is to identify the main determinants of the banking stability and soundness in the Central and Eastern Europe (CEE) banking systems. We assess the impact of different macroeconomic variables on the quality of capital and liquidity conditions and examine the behaviour of these financial stability indicators, by analyzing a sample of 10 banking systems during 2000-2011. The methodology is based on the empirical work of Schou-Zibell, Albert and Song (2010), which developed a supervisory framework for monitoring and examining the macro financial soundness.

This paper is organized as follows. Section 2 summarizes the literature review. Section 3 describes the data. Section 4 details the methodology. Section 5 presents the empirical findings. Finally, Section 6 concludes.

## **2. Literature Review**

A great amount of studies in the literature demonstrated that certain developments in macroeconomic indicators may be associated with banking crises. To name a few, the decline of GDP, excessively high real interest rates and high inflation rate may significantly increase the probability of developing a systemic banking crisis.

Shocks or negative externalities from trade imbalances can also stimulate the occurrence of banking problems. Gavin and Hausmann (1998), Morris et al. (1990), as well as a report from IMF (1993) highlight that adverse shocks in trading activity have a significant impact on the banking systems of Argentina, Chile, Colombia and Uruguay. They show that in some cases substantial decline of commercial activity precedes a banking crisis (Norway, Finland and Spain). However this claim has not been verified for Japan or Sweden. Demirguc-Kunt and Detragiache (1998) haven't found evidence of negative externalities from trade to banking stability.

The evolution of domestic credit to the private sector (as % in GDP) may be an early warning signal of problems in the banking system. A sharp increase of the domestic credit leads to financial vulnerability especially in situations of credit quality deterioration and risks incensement. Evans et al. (2000) shows that a sharp increase in lending capacity of banks is an indication of a poor credit rating and therefore of poor credit quality. However there is a significant number of studies that found that a too optimistic credit expansion could lead to a financial crisis (Kaminsky and Reinhart, 1999; Gavin and Hausmann, 1998).

In different studies was found that the ratio of money and quasi money (M2) to total reserves (international reserves, gold and currencies under the control of monetary authorities) has a significant influence on banking sector vulnerability. Banking system problems may be related to sudden withdrawals of capital. Demirguc-Kunt and Detragiache (1998), as well as Calvo (1996) show that this indicator is a good

predictor of a country's vulnerability to balance of payments crises, which could affect the whole banking systems.

### 3. Data Analysis

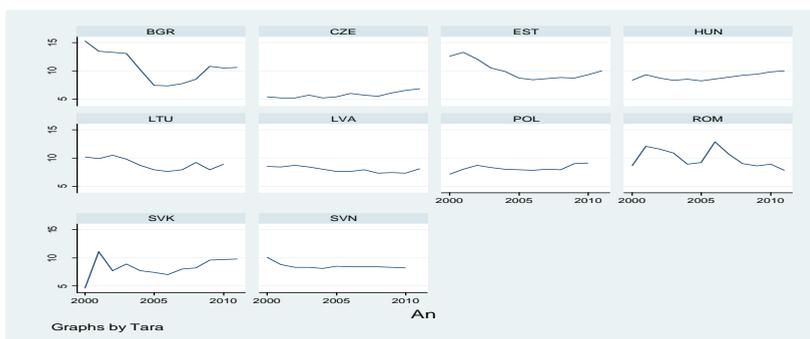
The data is representative for ten CEE banking systems: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia. The analysis covers the period 2000-2011. Table 1 presents the variables used. They can be grouped into the following categories: financial stability indicators, macroeconomic indicators, monetary indicators and market indices.

**Table 1:** Variables used in the study

Indicator	Symbol	Type	Source
Bank capital to assets ratio (%)	CAPA	Financial Stability Indicator	WDI
Bank liquid reserves to bank assets ratio (%)	LIQU	Financial Stability Indicator	WDI
Bank nonperforming loans to total gross loans (%)	NPER	Financial Stability Indicator	WDI
Inflation, GDP deflator (annual %)	GDPD	Macroeconomic	WDI
GDP growth (annual %)	GDPG	Macroeconomic	WDI
Money and quasi money (M2) to total reserves ratio	MQM	Monetary	WDI
Domestic credit to private sector (% of GDP)	PRVT	Macroeconomic	WDI
Trade (% of GDP)	TRD	Macroeconomic	WDI
Real interest rate (%)	RINR	Market	WDI

The historical evolution of the bank capital to total assets ratio in each country is illustrated in Figure 1. During 2010-2011 the highest capitalization ratios of banks were registered in Bulgaria (from 2000 to 2004 and from 2009 to 2011) and Romania (2005-2008). The smallest capitalization ratio was recorded in the Czech Republic (from 2001 to 2011). In Bulgaria the maximum capitalization rate was reached in 2000 (15.30%). In Romania the maximum capitalization ratio was reached in 2006 when it was 12.90%. The bank capital to total assets ratio register an average rate of 8.72% over the entire period analyzed. This shows a good level of capitalization of the banking system in Eastern and Central Europe. The minimum value is recorded by Slovakia in 2000 (4.6%) and the maximum value is recorded by Bulgaria in 2000 (15.3%).

During 2005 - 2008 there is a reduction of the capital to total assets ratio, which can be explained by an increase in financial intermediation through less conventional sources. After the 2007-2008 crises, banks have started to pay attention again to capitalization. The level of this rate increased after 2008 in all countries, except Romania, where the ratio decreased from 10.70% in 2007 to 7.80% in 2011.

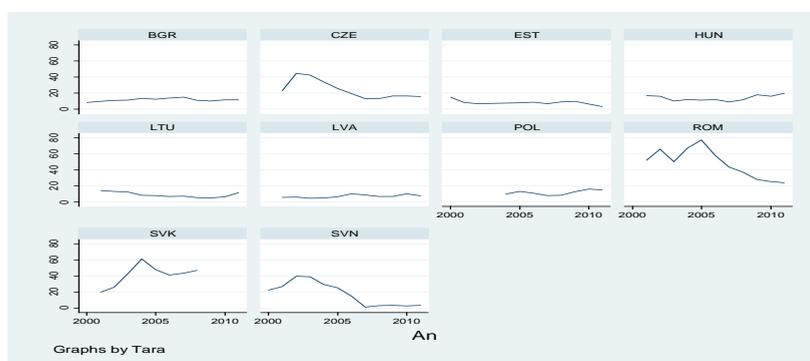


**Figure 1:** The evolution of bank capital to total assets ratio

Source: authors' processing

Regarding the bank liquid reserves to total assets ratio during the period 2000-2011, the highest values of these rates were recorded in Romania (in 10 of the 12 years analyzed) and the minimum values were recorded in Latvia during 2001-2005 (between 4.3% and 6.24%) and Slovenia in the period 2007-2010 (the rate lies between 1.12% and 2.32%). Over the entire period analyzed, Romania registered the highest average value of this indicator (47%), followed by Slovakia (41%).

Analyzing the annual evolution of the indicator, the maximum value of the bank liquid reserves to bank assets ratio was recorded in 2005 in Romania (77.21%) and minimum in Slovenia in 2007 (1.12%). The average value of this indicator is 18.38%. Interesting evolutions are recorded in Romania and Slovenia that register the extremes of these values. In Romania, the liquid bank reserves to total assets ratio increased from 51.49% in 2001 to 77.21% in 2005 and gradually decreased to 23.63% in 2011. In Slovenia, the liquid reserves to total assets ratio decreased from 39.68% in 2002 to 25.07% in 2005 and then fall sharply to 3.08% in 2011 (Figure 2).



**Figure 2:** The evolution of the bank liquid reserves to total assets ratio

Source: authors' processing

#### 4. Empirical Methodology

The empirical analysis regarding the impact of macroeconomic indicators on the financial stability of the banking system is made using the panel regression technique, through the least squares method. The panel regression model allows determining the macroeconomic variables that underlie movements in the financial

stability of the banking system. Panel regression models are estimated for two major macro prudential indicators: the capital adequacy to total assets ration and the liquid reserves to total assets ratio.

The panel consists of 10 cross-sections corresponding to Central and Eastern European banking systems and 12 years from 2000 to 2011. To capture the specific characteristics of each analyzed banking system were introduced individual fixed effects for each cross-section. They take into account the particularities of each country's banking system that are constant over time. In order to detect the existence of fixed effects we applied the F test. Its null hypothesis states that the dummy variables associated with the sections are equal to 0 ( $H_0: \mu_1 = \dots = \mu_{n-1} = 0$ ). The null hypothesis is rejected. Thus, the test result indicates the existence of fixed effects.

The use of fixed effects regression allows us to control for omitted macroeconomic variables that differ among countries but are constant over time. An underlying assumption in such models is that the model error does not display autocorrelation (Schou-Zibell, et al., 2010). Panel regressions are often used with fixed effects to allow the possibility of the dependent variable to interact between countries regardless of the explanatory variables included in the regression (Demirgüç-Kunt and Detragiache 1998).

In the present research, the panel regression model with fixed effects takes the following form:

$$IMacroP_{it} = \alpha_0 + \alpha_1 MacroI_{it} + \alpha_2 X_{it} + \theta_i + \varepsilon_{it} \quad (1)$$

where  $IMacroP_{it}$  represents the macro prudential indicators (the bank capital to total assets ratio and the bank liquid reserves to total assets ratio), categorized as financial stability indicators (FSI) of the  $i$  banking system at time  $t$ .  $\alpha$  is the constant of the regression equation.  $MacroI_{it}$  represents the  $i^{th}$  country-specific macroeconomic indicators at time  $t$ ,  $X_{it}$  is a set of control variables for the banking system  $i$  at time  $t$ ,  $\theta_i$  is the fixed effect for the banking system  $i$  and  $\varepsilon_{it}$  is the error term.

## 5. Empirical Results

### 5.1. Determinants of Capital to Total Assets Ratio

The availability of banking capital signals the banking system's resiliency to shocks. Capital adequacy ratio is the main indicator used to assess the banking fragility. In analyzing the determinants of the capital to total assets ratio we start from a basic regression that includes as explanatory variables the GDP growth, the inflation rate and the domestic credit to the private sector as percentage in GDP. In the second model we add the nonperforming loans ratio, which is expected to exert a negative influence on bank capital to total assets ratio. Finally, we account for the international trade activity of the countries analyzed in the third model, introducing it as a control variable (Table 2).

**Table 2:** Determinants of bank capital to assets ratio

Indic./model	Model 1	Model 2	Model 3
<i>GDPG</i>	-0.025 (0.031)	-0.023 (0.020)	-0.063** (0.028)
<i>GDPD</i>	-0.026 (0.023)	-0.004 (0.038)	-0.006 (0.032)
<i>PRVT</i>	-0.035** (0.014)	-0.036** (0.014)	-0.046*** (0.012)
<i>NPER</i>		0.023 (0.034)	0.020 (0.031)
<i>TRD</i>			0.028* (0.015)
constant	10.630*** (0.848)	10.407*** (0.709)	7.744*** (1.665)
N	112.000	109.000	109.000
N_g	10.000	10.000	10.000
R <sup>2</sup> within	0.225	0.236	0.279
R <sup>2</sup> overall	0.030	0.031	0.020
R <sup>2</sup> between	0.045	0.029	0.046

*Note:*

Unbalanced panel with fixed effects on cross-sections (banking systems) and correction for error robustness;

Standard errors in parentheses;

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%;

N is the number of observations;

N\_g number of cross-sections;

R<sup>2</sup> within is the coefficient of determination within a banking system during the analyzed period;

R<sup>2</sup> overall is the total coefficient of determination;

R<sup>2</sup> between is the coefficient of determination between the banking systems analyzed.

Source: authors' calculation

The determinants of the capital to total assets ratio for the analyzed banking systems are shown in the table above. Analyzing Student t statistic, we observe that several variables are significant in explaining the dependent variable. The share of the private domestic credit to GDP has a significant negative impact on the rate of bank capital to total assets in all of the three regression models. By introducing the nonperforming loans ratio in the model the intensity of the relationship between the private domestic credit in GDP ratio and the ratio of bank capital increases (Model 2). This means that an increase in bad loans, especially in the private credit sector, may possibly damage the quantity and quality of the bank capital. Thus, adding to the basic equation the nonperforming loans ratio and an increase of 1% in the domestic credit to private sector (as share in GDP), determine the capital to total assets ratio to decrease by 0.036%. Introducing in the regression model the percentage of international trade in GDP as explanatory variable, the impact of the private domestic credit ratio is higher, resulting a decrease of 0,046% of the capital to total assets ratio (Model 3).

These three regression models highlight that in countries where an important part of the credit is allocated to private domestic sector there is a greater possibility of deteriorating the quality and the quantity of bank capital. A sudden increase in the domestic credit to private sector as percentage in GDP ratio can create problems in the banking sector. This can cause financial vulnerabilities and the erosion of bank capital.

By introducing trade activity as a control variable, a rise in the GDP growth significantly influences the capital to total assets ratio in a negative manner. Thus, in the third model an increase by 1% in the GDP growth reduces the ratio of capital to total assets by 0.063%. A possible explanation for this finding is that if the GDP growth rate increases, banks use a higher proportion of their capital to finance loans and implicitly economic growth rate increases. On the other hand in case of a decreasing GDP, banks are increasing their capital in order to prevent some possible financial imbalances caused by the economic downturn.

An absolutely normal result that justifies the robustness of the regressions is revealed in the positive relationship between the capital to assets ratio and the trade activity. Thus, an increase in import and export activity of a country can improve the bank capital. On the other side, possible shocks on a country's trade activity can lead to deterioration of the bank capital. The regressions did not revealed significant influences of the nonperforming loans ratio and the inflation rate on bank capital to assets ratio.

## 5.2. Determinants of Bank Liquid Reserves to Total Assets Ratio

One of the 2008-2009 financial crisis causes was the lack of liquidity in the banking system which led to the collapse of several banking institutions and macroeconomic imbalances. Given the importance of liquidity for the banking system, we propose several models in order to determine the macroeconomic variables that have a significant influence on the liquid reserves to total assets ratio (Table 3). We propose this liquidity proxy as dependent variable, because it includes the most liquid reserves of banking systems such as: bank holdings in national currency and the bank deposits at central banks. The bank assets considered include claims against other governments, non-public enterprises, private sector and other banking institutions.

**Table 3:** Determinants of bank liquid reserves to bank assets ratio

<b>Indicator/model</b>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
<i>INFLATION</i>	0.469* (0.214)	0.759*** (0.219)	0.617*** (0.175)	0.682*** (0.185)
<i>GDPD</i>	0.189 (0.168)	0.435* (0.193)	0.118 (0.213)	0.106 (0.266)
<i>NPER</i>		-0.141 (0.300)	-0.053 (0.333)	-0.303 (0.299)
<i>RINR</i>		1.034** (0.320)	0.640** (0.274)	0.516 (0.389)
<i>PRVT</i>			-0.130 (0.103)	-0.030 (0.054)
<i>MQM</i>				-8.458*** (2.481)
constant	15.127***	9.423**	19.112**	30.334***

<b>Indicator/model</b>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
	(1.667)	(3.540)	(6.763)	(7.259)
N	107.000	98.000	98.000	94.000
N_g	10.000	10.000	10.000	10.000
R <sup>2</sup> within	0.078	0.132	0.178	0.264
R <sup>2</sup> overall	0.157	0.288	0.379	0.207
R <sup>2</sup> between	0.307	0.493	0.591	0.271

*Note:*

Unbalanced panel with fixed effects on cross-sections (banking systems) and correction for error robustness;

Standard errors in parentheses;

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%;

N is the number of observations;

N\_g number of cross-sections;

R<sup>2</sup> within is the coefficient of determination within a banking system during the analyzed period;

R<sup>2</sup> overall is the total coefficient of determination;

R<sup>2</sup> between is the coefficient of determination between the banking systems analyzed.

Source: authors' calculation

In order to identify the determinants of bank liquid reserves we start from a basic regression that includes as independent variables the inflation and GDP growth rate. Inflation is introduced as explanatory variable because it is an indicator of a vulnerable macroeconomic environment. We found a direct significant relationship between liquid reserves of the banking system and inflation. The sign of this relationship is as expected because the inflation reduces the value of bank guarantees (Evans et al., 2000). However a decrease in the inflation rate has the effect of reducing the nominal income of banks, affecting their liquidity.

In Table 3 (Model 4) it could be seen that, by including in the regression model more macroeconomic variables, the impact of inflation on liquidity ratio increases, from 0.469% to 0.682%. After introducing in the regression the ratio of nonperforming loans to total gross loans and the real interest rate, the GDP growth becomes significant (Model 2). As expected, the GDP growth rate influences in a positive manner the liquid reserves to total assets ratio.

The real interest rate has a positive significant impact on the liquidity. The sign of this relationship is as expected. Under conditions of low liquidity in the market the real interest rates increases (Stracci, 2005). Those who observe the liquidity deficit are expecting greater returns, which anyway are eroded by high intermediation costs in terms of poor liquidity. Generally, in such cases, central banks intervene by injecting liquidity to reduce the real interest rate and to improve market liquidity.

Banking systems may be vulnerable in the presence of sudden outflows of capital, especially in countries with fixed exchange regime (Demirguc-Kunt and Detragiache, 1998). To check this hypothesis in Central and Eastern European banking systems we include as explanatory variable a monetary indicator, the share of the money and quasi money aggregate indicator (M2) in total reserves. We found a strong negative relationship between the liquid reserves in total assets ratio and the M2 in total reserves ratio. A 1% increase in the money supply to total international reserves ratio determines a decrease with 8.45% of the liquid reserves to total assets ratio.

## 6. In Conclusion

The empirical study confirms the interdependency between the economic sector and the banking sector. Business cycle captured by GDP growth evolution has a significant influence on the capital to total assets ratio and on the liquidities to total reserves ratio. During economic booms bank capital erosion occurs due to increased bank assets during those periods, but there is an increase of bank liquid reserves. On the other hand, higher inflation increases bank reserve liquid. Bank capital to total assets ratio is negatively influenced by the evolution of the domestic credit to the private sector (as percentage in GDP) and positively influenced by the development of a country's international trade activity. However, an increase of the real interest rate determines the liquid reserves to total assets ratio to increase. Also, the increasing of the share of the monetary aggregate M2 in the total international reserves determines the significant decreasing of the liquid reserves to total assets ratio. Even if in Romania were registered good levels of capital adequacy and bank liquidity indicators, we consider that high attention is needed in the administration of the bank capital and liquidity, because of the high fluctuations observed in our analysis. As a final conclusion, we consider that there is a real need for an effective macro prudential supervision at country level which enables the supervisory authorities to have an adequate control of macro prudential indicators depending on the macroeconomic evolutions and to take appropriate decisions, at the right time, on the appropriate macro prudential policy in order to avoid financial crises.

## 7. Acknowledgements

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***SUB-SECTION: ACCOUNTING***



## THE CONCEPT OF PERFORMANCE - HISTORY AND FORMS OF MANIFESTATION

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**Abstract:** Nowadays, a more and more overwhelming role comes to global performance considering the intense competition at every market level. The competition law governs any conducted activity, thus the weakest, without the capacity of adaptability being removed from the competition, also economic, social and environmental changes which, at a global level, led to changing the way of thinking and conducting the global economic activities. At present, performance plays a fundamental role in the survival of the entities found in a permanent adaptation to the market demands by implementing new and successful management strategies. These strategies must cope with the elements specific to contemporary economy, meaning a competitive, unstable and turbulent environment and, under these circumstances, viability of economic agents cannot be achieved without talking about performance. Modern economic entities must cope with the demands of the new global economy, such as global economic crises, economic liberalization, high growing pace of competition, so that they can achieve the predetermined objectives, having the maximum of effects with the minimum of effort, but at the same time one should not neglect the social and environmental factors, directly or indirectly involved in conducting the activity. In the conditions of an environment which denotes less stability, the entities must be capable of making strategical decisions necessary for maintaining a balance and for being able to address and implement strategies for future, strategies which allow maintaining the organisation healthcare unaltered. Thus, we cannot bring into discussion the competitiveness of an entity in the conditions of a turbulent, fluctuating and especially competitive environment without talking about performance. This scientific approach has started from the premise that any economic entity has the goal of getting performance in conducting the activity. Thus, we have tried to get inside the problems of defining the concept of performance, starting from its beginnings until present, following the path taken by this concept from defining it according to a series of criteria such as: profitability, productivity, flexibility, adaptability, growth, to defining it as the level of achieving the organizational objectives; to assessing it according to productivity and efficacy of the economic entity; to its contemporary approach as the creation of value. Moreover, we are trying the defining of performance according to efficiency, efficacy and economies. As a result, being performant means combining all three variables, their combination reflecting the level of performance of an entity.

**Keywords:** performance, efficiency, economies, efficacy, yield.

**JEL classification:** M41

## 1. Introduction

At present, when competition for each market share has become more and more severe, performance plays a fundamental role in the survival of under in a continuous adaptation to market requirements by implementing new and performing management strategies. These strategies must cope with the elements specific to contemporary economy, defined by a competitive, unstable and turbulent environment, and under these circumstances, the viability of economic agents cannot be achieved without referring to performance.

The term of *performance* has been defined repeatedly and at different times in the social evolution and it is in a continuous development, without having reached an agreement, because there is a numerous series of factors which influence performance directly or indirectly, such as the activities performed by the entity, the interests and the objectives of each economic entity.

The term of *performance* has a Latin origin, where the verb *performare* had the meaning of finalizing a predetermined activity. Nowadays, the significance of performance comes from the English language, from the verb *to perform*, which signifies the regular accomplishment of a thing that requires ability or a certain skill. The noun *performance* denotes the manner of achieving the objectives predetermined by an entity.

## 2. Research methodology

In order to achieve all the objectives referring to the scientific research, this particular research is based on certain methods of the scientific inquiry, methods which will be outlined further on. Thus, throughout this scientific approach, we used the method of theoretical study and analysis in order to extrapolate the research level regarding performance from the beginnings to present days. Furthermore, we used the comparative method for approaching theoretical aspects, aspects which are better emphasized with the help of this method by gathering them and then comparing them. The observation method is also used throughout this scientific approach, first appealing to its non-participating character, by exposing researchers' various opinions, and then to its participating character, by drawing some conclusions related to the presented approaches.

Regarding the research techniques and procedures which we used throughout this scientific approach, we considered the following: the study of specialised bibliography, using various bibliographic sources, such as regulations, articles and special books, statistical sources, gathering and then processing data, presenting theoretical aspects by using graphics-figures. The research this approach is based on is a fundamental one, which aims at the study of the performance concept, a characterization of this concept being based on certain criteria. Actually, this research pursues finding the answers to some questions, such as: -what does performance represent? – how can we classify performance? - what was the evolution of the notion of performance in time?, the research being done by studying special bibliography( books, articles) and carrying out a temporal analysis of the performance concept.

### 3. History of the performance concept

One of the major discussions in the contemporary market strategy refers to the decisive factors of the company's performances. Teachers from various fields focused on explaining the company performance and on identifying the sources of different levels of inter-firms performance. (McGahan and Porter 1997) . Nicoleta Barbuta-Misu (2008) states the fact that performance in a modern company may be defined as a state of competitiveness achieved through a high level of efficiency and productivity, having the goal of assuring a durable position on the market.

Nadia si Cătălin Albu (2005) consider the concept of performance as not being easy to define, because it is an ambiguous and integrative concept. Performance means success, competitiveness, achievement, action, constant effort, it is optimizing the present and protecting the future. Performance is created by a company through environmental reporting, following the way of creating value.

According to Alazard and Separi (1998) , performance leads to a global vision of interdependencies between internal and external parameters, quantitative and qualitative, technical and human, physical and financial ones of management.

The concept of performance is analyzed in time, being directly influenced by the evaluation criteria of it, thus we can find the following periods:

1. *Between 1957-1979*, a period when the evaluation of performance does not know a convergence, this one being defined on the basis of a *range of evaluation criteria*, such as: profitability, productivity, creativity, flexibility, adaptability, growth, development, market penetration, planning, quality of staff;
2. *Between 1981-1994*, a period when performance is defined as being a standard of the level of *achieving the organisational, strategic objectives*; thus, it is considered that an activity is successful if it achieves the goals. Under these circumstances, performance depends on the multiple established goals and objectives;
3. *Between 1995-2000*, when performance is defined according to *productivity and efficiency of the economic entity*, thus, by means of productivity, the results achieved at the involved means being reported, and by means of efficiency, the results achieved at the predicted results;
4. *From 2000 until present*, when performance is defined according to *value creation*. The success in a company activity lies in its capacity to identify the sources of value creation and to exploit them properly. The value is judged both from the products point of view and from the organization as a whole.

Throughout these periods, a gradual transition is made starting from the economic performance to the organizational and social one and then to the global one. Performance evolved altogether with society development, being in a permanent adjustment to the social and environmental conditions of the period to which the performance reference is made.

Lulia Jianu (2007) in the book *Evaluarea, prezentarea si analiza performantei întreprinderii*, makes a detailed presentation about the notion of performance, throughout its evolution, out of which we have considered relevant the views of the following authors:

- *Georgopoulos and Tannenbaum* (1957) consider it as being the equivalent of organizational efficiency, which represents the degree with which an organization, as social system and keeping in mind some limited resources and means, achieves

its goals without an excessive effort from its members. The criteria used for assessing performance are: productivity, flexibility, interorganizational tensions;

- *Yachtman and Seashore (1967)* define performance as being the company capacity to exploit the environment so as to achieve rare and essential resources to its function;

- *Price (1968)* considers that performance is synonymous with organizational effectiveness, and it uses the following as criteria of evaluating performance: productivity, conformity, institutionalizing;

- *Labrousse (1971)* characterizes company performance, during this period, as being a chain of attributes specific to it: a company capable of coping with foreign competition, a well-run company which manages to quantify its productive effort at minimum costs, a company capable of exploiting a niche and establishing an important enlargement;

- *Moh (1972)* identifies as criteria of evaluating performance: productivity, flexibility, adaptability;

- *Gibson (1973)* uses the following criteria in assessing performance: productivity, efficiency, satisfaction, flexibility, development, survival;

- *Harrison (1974)* defines performance as the final outcome of evaluating the effort;

- *Shashua and Goldschmidt (1974)* are the first researchers who managed to define the concept of financial performance, according to the following criteria: profit margin, share profitability, capital profitability, rate of operating capital, rate of activity. These criteria simply represent indicators for measuring profitability and financial position, indicating the enterprise performance;

- *Klein (1976)* sustains that performance is a subjective and relative notion, mentioning six indicators which highlight the company performance: growth of the added value, return on engaged capitals, growth of fixed assets, changes in the workforce, covering the operating needs from the working capital, appointed liability compared with self-financing capacity;

- *Dubois (1979)* does not define performance, but he assesses it using five rating indicators: growth, profitability, productivity, liability, solvency;

- *Bourguignon (1995)* defines performance as being determined by achieving the organizational objectives;

- *Burlaud and Langlois (1999)* considers that performance is not bad or good in itself. It is the same performance which can be evaluated as good if the objective is modest, or as bad if the objective is ambitious;

- *Cohen (1995)* makes a comparison between performance and efficiency and he sustains that performance assessment consists in comparing a monetary indicator showing the outcome of the company and a monetary indicator related to the employed means;

- *Lorino (1995)* considers that performance for an enterprise means everything that contributes to the improvement of the value-cost couple and not only what contributes to the cost decrease or to the value increase;

- *Porter (1986)* believes that the company performance depends on the ability to create value for its clients;

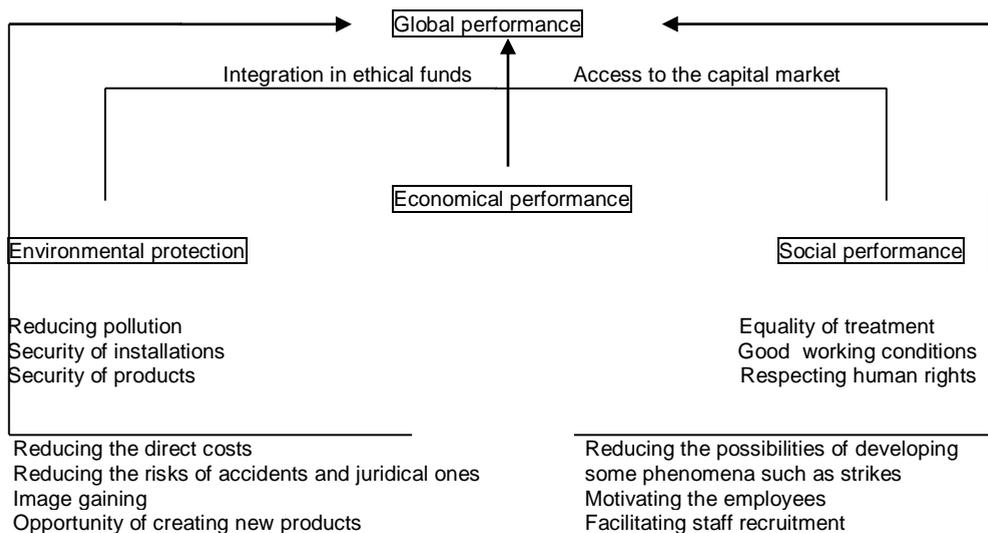
- *Marmuse (2000)* defines performance as being the one which allows maintaining a distance from the competition on a long term by being very motivated (based on the rewarding systems) applying to all members of the organisation;

- *Waterman (1995)* assimilates performance to the concept of excellence, which

is based on four factors: the organization efficiency, social identity, achieving the objectives, the reputation of the organizations.

Continuous performance is the ultimate goal which is intended to be achieved by any organization, because only by attaining it can growth and a further progress develop. This represents the most important quantifying key of an entity's success. At present, the goal is to achieve a global performance which is determined and conditioned by a mixture of internal and external parameters, technical and human, qualitative and quantitative ones. Global performance is a summation of the socio-economical performances with the ones of the environmental protection.

Reynaud (2003) manages to present global performance schematically by using the Figure 1:



**Figure 1** - Global performance of the entity  
Source – Reynaud , 2003

According to this figure, in order to achieve global performance all growing criteria of environmental performance must be monitored and carried out, as well as the economical one and last but not least the social one, among these criteria being noticed: reducing direct costs, image gaining, motivating the employees, increasing the profitability.

Based on the foregoing, on the definitions and characterizations made to performance over the years, we can conclude that performance represents the degree in which an entity comes to achieving both the internal and external environment, by an optimal combination between efficacy, economies and efficiency. Regardless the field we relate ourselves to, you cannot be a winner without knowing the purpose and the means, without tracing out a way to follow and the resources you need in order to develop the process in which you are involved, without being prepared and motivated to succeed. Without a proper management of an activity we cannot discuss about performance and a successful system.

#### 4. Performance defined using the 3E : efficiency, efficacy and economies, as forms of manifestation

Professor Mihai Ristea (2002) thinks that the following three concepts can be associated with performance: efficiency, economies and efficacy. This approach to performance was named by the professor as being the equation of the 3Es, and mathematically, it could be represented as follows:

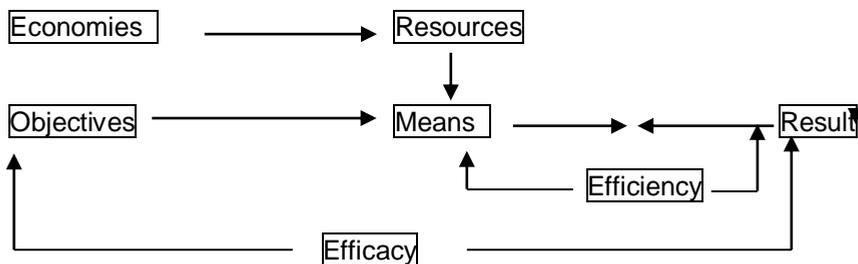
$$PERFORMANCE = EFFICIENCY + EFFICACY + ECONOMIES$$

It can be noticed the fact that an entity is successful when it is efficient, effective and economical. Therefore, to be successful means combining all three variables, the combination of which reflect the performance level of an entity.

*Efficiency* consists in either using a quantity given by resources, aimed at the highest level of the achieved results, or reducing the quantity of the used resources with the aim of achieving a predetermined result.

*Economies* consists in providing the means, the necessary resources to performing an activity at the minimum cost.

*Efficacy* is determined by achieving or exceeding the predetermined results to the actual results made throughout the development of the activity. This represents the ability of the enterprise to meet and even exceed the expectations of users of the accounting information (shareholders/associates, clients, suppliers, employees, government) at the same time with reaching the predetermined organizational objectives. An entity reaches efficacy when it manages to improve the way of using all sources which are available and necessary to the development of the activity, performing as well as possible the needs and the requirements of the external partners of the organization. Schematically, the relation between efficiency, efficacy, economies can be synthesized using the Figure 2:



**Figure 2** – Articulation of efficiency-efficacy-economies

Source- Jianu, 2007

It must be stated the fact that the correlation of the 3 Es leads to performance achievement only if this performance is long-lasting, having the target of achieving the strategic objectives.

Performance is a state of competitiveness of an enterprise, reached by a level of efficacy and efficiency which ensures a sustainable presence on the market, as those presented by Niculescu and Lavalette (1999) .

The notion of *efficiency* has known, throughout its history, more approaches in the professional literature . Some authors consider that an activity is efficient when the goal is achieved with the least effort. In this situation it is important to establish the level of correlation between the achieved results and the established objective, from which the activity developed becomes efficient.

As a general approach, efficiency is defined as the direct or indirect report between the useful achieved effects and the effort made:

$$Efficiency = \frac{Effect \text{ or } Effort}{Effort} \quad \frac{Effort}{Effect}$$

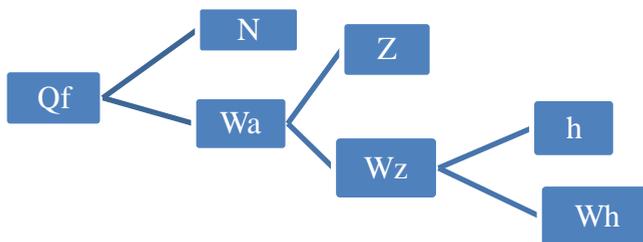
According to some researchers, a temporal character was assigned to this report, efficiency being defined as the maximum effect obtained at a certain level of expenses, in the shortest time.

Efficiency is found in many forms, depending on the activity which is carried out and the results which are obtained, thus being outlined the following forms of efficiency:

- *Productivity* – when determining the efficiency of using human resources ;
- *Profitability* – case when the capacity of making profit is assessed ;
- *Efficiency* – the decisive factor being the efficiency of using assets .

*The efficiency of using human resources* can be expressed by a series of rates designed by reporting the results obtained when using human resources. These results can be expressed by producing manufactured goods , by the exercise production, turnover, value added; while human resources used can be expressed by the average number of staff, total consumption of days-man or hours-man.

The influence of labour productivity on the production of manufactured goods is shown in the Figure 3:



**Figure 3** – The influence of labour productivity on the production of manufactured goods

Source – Camelia Burja, 2009

Profitability is a form of economic efficiency which highlights the financial results of an enterprise. It summarizes the quality of the conducted activities at every stage, at all levels; it synthesizes the productivity of factors of production consumption, the performance of all developed activities. Maximizing profitability is the aim of any capital holder, the goal of the entire activity taking place in a market economy. Profitability provides resources for both developing the respective economic activities and for increasing personal and public consumption.

Burja C. (2009) considers that the yield determined by the efficiency of using fixed assets expresses the report between the useful economic effect synthesized by a series of summary indicators ( goods production, turnover, value added , profit) and the value of fixed assets provided by the economic agents.

When you want to analyze the economic-financial performance of an entity it is used a series of indicators which transpose the achieved results on one hand and, on the other hand, the efforts made to have results with the purpose of achieving an analysis of the efficiency of the whole developed activity.

To summarize the above, we can say that performance represents a state of continuous competitiveness of the enterprise reached by a level of efficacy, economies and productivity (efficiency) which can guarantee a stable position on the market, position which must be improved permanently, considering the intense competition of our days.

As a result, efficacy represents a quantification of what is done, efficiency represents an indicator of how it is done and economies is a measure of the minimum cost of providing the sources for developing the activity; and the primary aim is reaching the objectives, simultaneously with providing the growth of maximum possible value.

The growth of value is found under different forms and this growth of value is presented as such to the users of accounting information such as shareholders, suppliers, clients, employees, banks. The higher the growth of value is at the organization level, the more resources it has in order to be able to reinvest them in the competitive struggle on a long term.

## **5. Conclusions and suggestions**

Regarding this scientific step, we can conclude that we have approached a complex theme, contemporary to global economy, and that is the performance of the economic entities, treated from the view of the evolution of defining this concept, of the way of approaching it, of the different forms of its manifestation.

The aim of this approach is to clarify the notion of performance. We can conclude from this approach that performance must not be regarded only from the economic and financial point of view, but it is necessary to include the aspects related to the environmental and social factors as well. We cannot discuss about performance without taking into account these two essential factors in current market conditions. Nowadays, the economic entities are under permanent pressure, thus we have higher and higher demands from shareholders, from employees, from clients, from suppliers and in order to be able to cope with all these requirements in optimal conditions, the entity must adapt to all these demands, this being the only way to discuss about global performance. This approach has attempted to present a synthesis of the concept of performance, the evolution of it in time, a definition of this concept using efficiency, efficacy, economies.

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# AN ANALYSIS OF THE PERCEPTION OF CHARTERED ACCOUNTANT TRAINEES REGARDING ACCESS TO THE ACCOUNTING PROFESSION AND PROFESSIONAL TRAINING NEEDS

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**Abstract:** *In Romania, the certification of the quality of chartered accountant is accomplished by CECCAR<sup>(i)</sup>. It is conditioned by the completion of the period of initial training. A part of this period is provided by the universities, while the other part is provided by CECCAR through the national 3-year internship programme. The objective of our survey was to analyse the way in which chartered accountant trainees perceive the access to the accounting profession, their own limitations in terms of competences, the need for professional training, and the benefits ensured by the professional training within CECCAR. Being a member of IFAC<sup>(ii)</sup>, CECCAR has implemented the requirements of the international education standards. The results of the survey confirm that due to differences in their educational backgrounds trainees perceived certain barriers preventing their access to the accounting profession. They also considered that the training of chartered accountants should be provided by CECCAR rather than by the universities. The self-assessed competence level of trainees in fields such as accounting, taxation, or IT was appreciated as at least good, while the competences regarding organizations and businesses, international financial reporting, corporate governance, and financial markets were appreciated as modest. The need for professional training is assessed by trainees considering the immediate practice and not the expectations regarding future career development or future evolutions of accounting practices. The trainees in our survey do not consider necessary any investment in competences that they cannot use immediately at the level required by small and medium-sized businesses they work for. This implicates that results should be interpreted with caution and other factors (such as long term trends and expectations) should be considered in establishing the educational needs of future accountants.*

**Keywords:** *accounting education; access requirements; technical skills; personal skills; professional training needs*

**JEL classification:** *M41, I21, I25*

## 1. Introduction

In Romania, the professional training required in order to acquire the title of chartered accountant starts at the university level but continues with the internship programme provided by CECCAR.

Both graduates of the faculties in this field as well as graduates from other fields of economics have access to the accounting profession, provided they pass the

internship access examination. The requirements for the access to the accounting profession are defined by CECCAR taking into account the knowledge and competences provided by the universities for the graduates of the faculties in this field, but also the requirements of the international education standards (IES 1 "Entry requirements to professional accounting education programmes" and IES 2 "Content of professional accounting education programmes"), as well as the recommendations of the Ministry of Public Finance, the Ministry of Justice, and those of the business environment.

Over the past few years, the access to the accounting profession has been facilitated by the protocols concluded by CECCAR with the accounting Master's programmes provided by many of the universities in Romania. In order to access the internship programme without an entrance examination, it is necessary as the curriculum of the Master's programme in question to comprise at least 5 of the 7 disciplines for which one needs to take an exam in order to access the internship programme, and for the applicant to pass the examinations with a mark of 7 (out of 10) or above.

The CECCAR trainees come from different generations and have been educated at different universities. That is why it is very likely that they may perceive the access to the accounting profession in different ways. Irrespective of the way of access, the trainees meet to a reasonable degree the minimal requirements imposed by CECCAR. However, entry into the profession is perceived as being easy by some of the trainees and as difficult by others. The expectations in terms of the professional acquisitions within the internship programme also differ. The personal needs in terms of professional training may differ significantly, depending on the perspectives offered by the labour market, on the current activity of the trainees, on their predisposition to intellectual effort, and the individual's own standards regarding personal education and development.

## **2. Literature review**

In Romania, the scientific preoccupations regarding accounting education have been around for only a few years. These most often involve either the analysis of the coherence of the universities' curriculums with IFAC's international Education standards, or the analysis of the degree to which universities prepare graduates for the needs of the labour market.

Investigating whether the education of the young graduates ensured by the Romanian universities is adequate or not, in terms of the curriculum, to the employers' requirements, Diaconu P. et al. (2011) points out that the curriculums of the Romanian universities in the field of economics, although adequate in terms of theoretical knowledge, ought to be adjusted taking into account the needs of practice, especially in terms of the development of the personal skills which are very important in a competitive selection process: communication, initiative, motivation, honesty, capacity for analysis and synthesis, organization, etc.

Muțiu A. and Tiron A. (2009) conducted an evaluation of the stage of the curriculum provided by the Romanian universities regarding the disciplines which contribute to the development of the leadership abilities of graduates. Their conclusion was that Romanian universities provide the starting point for leadership development and prove that the degree of cohesion with the IES provisions has grown rapidly.

Albu et al. (2011) analysed the hybridization process of the accounting jobs in Romania during the period 2007-2009. The competences regarding the IFRS were

relatively unimportant to hybrid accountants in the first two years, but they gain a certain degree of relevance by 2009. From the analysis of the company websites, the requirements for IFRS knowledge occur mostly in the case of the branches of certain foreign entities. The authors identify a series of institutional, technical, and global factors, which determine an evolution toward the hybridization of the tasks that accountants have. They also analyse if the implementation of the IFRS is associated with any changes in the skills required by the employers or if they lead to the hybridization of the accountants' tasks.

The image and the role of professional accountants depend on certain stereotypes. In this context, there have been conducted studies with regard to appreciating whether the universities train specialists that correspond to the existing stereotypes of the accountant or if the universities take on an active role in the betterment of the image of professional accountants in society, in agreement with the tendencies followed by the profession (Albu et al., 2012).

It is the aim of the present survey to expand the area of investigation in terms of accounting education so as to include the manner in which future chartered accountants perceive the access to the accounting profession and the postgraduate professional trainees.

### **3. Research methodology**

The main objective of our survey was to analyse the way in which chartered accountant trainees perceive the entry into the profession, the professional requirements that need to be met in order for one to acquire the title of chartered accountant, and CECCAR's role in satisfying these needs through the internship programme.

In order to achieve this objective, we have tried to find out the following:

- Which are the fields of competence relevant to the access to the profession and which are either not represented or just poorly represented in the initial training stage (undergraduate/Master's level)?
- Which are the fields of competence which the trainees perceived as barriers hindering entry into the profession?
- Who should provide the training of the future chartered accountants (the universities or rather CECCAR)?
- How was the practical experience acquired?
- How do the trainees appreciate the level of competence in the various fields defined in the IES 2 standard issued by the IFAC?
- What are one's own professional training needs?
- Do the competences of a chartered accountant exceed the needs of the small and medium-size enterprise practices? Etc.

For this purpose we have put together a questionnaire with 19 questions, of which 15 are closed and 4 are open.

The questionnaire was distributed to a number of 200 trainees included in CECCAR's collective internship programme (either direct, during the technical training courses, or by e-mail). The questionnaire targeted trainees who passed the examination for access to the internship programme, who are enrolled with CECCAR's territorial branches (other than the Bucharest Branch and the Ilfov Branch), and who work in small and medium-sized enterprises (SMEs), but also in small offices (SMPs). The responses came from the following branches: Argeş, Gorj,

Mehedinți, Bihor, Satu Mare, Tîrgu Mureș, Arad, Timișoara, Vrancea, Bacău, Ialomița, and Constanța.

146 responses were received (response rate 73%), of which 18 were cancelled because they were incomplete. Consequently, the sample is made up of 128 respondents, of which 29 are men (22.65%) and 99 – women (77.35%). The structure by years of internship: 34.38% first year, 21.88% second year, 43.73% third year. The structure by age: 33.59% between 20 and 30 years of age; 39.06% between 30 and 40; 27.34% over 40.

60.93% of the respondents are graduates of a faculty of accounting or other departments in this field. 56.81% of the first year trainees have not graduated from a faculty/department in this field, while 71.42% of the second year trainees hold a degree in this speciality.

#### **4. Survey results**

A little more than half of the respondents consider that the accumulation of specialty knowledge and professional experience needed to obtain the professional qualifications in the field of accounting should be provided as part of the internship programme provided by CECCAR (58.59%) rather than by the universities (41.41%). These expectations regarding CECCAR's educational programme are more evident in the case of first year trainees (61.36%) and drop slightly in the case of second year (60.71%) and third year (55.36%) trainees.

Most of the respondents who are third year trainees and fall into the 20-30 years of age group consider that training in the field of accounting should be accomplished at the university (72.73%) rather than by the internship programme provided by CECCAR, while the trainees who fall into the age group of over 40 years are of the other opinion (78.57%).

This perception is determined by the fact that, over the past few years, the universities (especially those in the larger university centres) brought the curriculums of their faculties/departments in this field closer to the requirements for access to the profession. Access to the profession is perceived as being easier by the young trainees than it is by those who are part of the last age group. At the same time, the young trainees perceive the added value ensured by the completion of the internship programme provided by CECCAR less strongly than do those in the last age group. The concluding of protocols between CECCAR and the Master's programmes of many universities with a view to facilitating access to the internship programme without the need of an examination is appreciated very favourably by the trainees. These protocols involve the development, as part of the curriculum of the accredited Master's programmes, of the nucleus of competences that are absolutely necessary for access to the profession (at least 5 of the 7 disciplines required for the internship access examination need to be comprised by the curriculum, and the examinations need to be passed with a mark of 7 out of 10 or above).

The faculty one has graduated from does not seem to be a relevant factor in the perception of the trainees with regard to who should provide the professional knowledge and competences necessary for access to the profession (i.e., CECCAR versus the universities). 58.97% of the graduates of the faculties in this field and 58% of those who do not hold a degree in accounting opined that it is CECCAR that should ensure the achievement of the requirements for access to the profession. This situation is explained by the fact that, irrespective of the initial training, the

examination for access to the internship programme with a view to acquiring the title of chartered accountant allows the selection of candidates with a reasonable and comparable level of knowledge, in accordance with the CECCAR requirements. These requirements involve the acquisition of knowledge and competences ensured by the faculties/departments in this field. These requirements are covered by the graduates of faculties other than the faculties in this field through individual effort, practical experience, and the support provided by CECCAR in the training of the candidates for the access examination.

The respondents consider that the larger part of their specialty knowledge and competences are the result of the professional experience acquired with the aid of the employers and of a favourable work environment (56.82% of the first year trainees and 60.71% of the second and third year trainees, respectively).

The percentage of those who consider that the current professional level is rather a result of the internship programme provided by CECCAR increases from one internship year to the next (9.09% of the first year trainees, 17.85% of the second year trainees, and 25% of the third year trainees). This evolution confirms an increase in the awareness of the existence of the added value ensured by CECCAR's educational programme as one advances inside this programme. However, the respondents tend to assign importance especially to the knowledge and competences used in the professional activity and they consequently attribute the greater part of their professional acquisitions either to specialty practice or to individual effort.

A reverse evolution in comparison to the one mentioned above is noted in terms of attributing the current professional level to the universities. It is the first year trainees who consider that a large part of the professional acquisitions were ensured by the universities (34.09%). The percentage drops as the trainees progress in their attending the internship programme provided by CECCAR and the respondents accumulate relevant practical experience (21.43% of the second year trainees and 14.29% of the third year trainees).

An analysis by age groups confirms the opinions collected according to internship years. The young specialists (age group 20-30) attribute their current professional level to the universities (44.19%). The same proportion (44.19%) of respondents in this age group attributes the professional level to enterprise practice. This situation is explained by the fact that 51.16% of the respondents comprised in this age category are graduates of a faculty in this field, the rest being graduates from faculties in other fields (48.84%).

The education programme provided by CECCAR is more appreciated by the respondents who fall into the latter age groups (by 18% of the ones aged 30-40 and 25.71% of those aged over 40) than it is by the ones of the first age group (11.63% of the ones aged 20-30).

This perception is justified by the respondents either by the fact that the internship programme covers a series of competences insufficiently represented in the initial training period, or by the fact that the programme ensures the development of new competences, and especially the maintenance of the existing knowledge and competences, in a context where enterprise practice favours the loss of a large part of this knowledge and of these competences, as a result of the limitations imposed by the job requirements (most of the respondents work as employees with SMEs or SMPs and so do not use except part of the competences ensured by the access to the profession and, subsequently, by the internship programme).

The respondents were asked to appreciate how they acquired the practical experience that they have. Regardless of the internship year and age group, the perception of the respondents is that the role of the employer and the existence of a favourable work environment, on the one hand, and also the existence of mentors, on the other hand, are the essential factors in the acquisition of relevant practical experience (from 70.45% in the case of first year trainees to 83.33% in the case of third year trainees). It is the first year trainees who insisted that their practical experience was the result of their individual effort, in a situation where no one was willing to provide any help in this sense (29.55%). In terms of age group, it is the especially those in the first group (26.19%) and those in the last group (28.57%) who have the same perception.

This perception is much weaker among the third year trainees (16.67%), but also among those aged 30-40 (14.29%).

Given the differences that still exist among the curriculums of the faculties in this field but also given the differences in the manner of the approach of the content elements of the disciplines involved in the access examination for the acquisition of the title of chartered accountant organized by CECCAR, we have tried to identify those competence domains which were either not represented or just poorly represented in the curriculums and in the content elements during the initial education (undergraduate and/or Master's level, as the case may be).

**Table 1:** The domains not represented or poorly represented in the curriculums during the initial education period (undergraduate and/or Master's level).

Competence domains: a) Financial Accounting compliant with the European directives; IFRS; c) Management Accounting; d) Performance Management; e) Consolidated Accounts; f) Audit; g) Evaluation; h) Forensic Accounting; i) Law; j) Professional Ethics.			
Total respondents	Year I	Year II	Year III
b)89.84%	b)81.82%	b)100.00%	b)91.07%
e)66.41%	e)70.45%	j)82.14%	j)62.50%
j) 62.50%	h)61.36%	e)78.57%	e)57.14%
h)52.34%	f)56.82%	i)67.86%	h)48.21%
i)47.66%	j)50.00%	h)46.43%	i)44.64%
f)36.72%	i)38.64%	c)42.86%	c)39.29%
c)35.94%	g)29.55%	j)17.86%	f)30.36%
g)23.44%	c)27.27%	g)17.86%	g)21.43%
d)15.63%	d)25.00%	d)7.14%	d)12.5%
a)5.47%	a) 6.82%	a) 7.14%	a) 3.57%

Let us arrange in descending order the competence domains not represented or poorly represented in the course of the initial education, taking into account the opinions of all of the respondents: IFRS, Consolidated Accounts, Accounting Ethics and Doctrine, and Forensic Accounting. At the opposite end of the scale are domains such as Management Accounting, Evaluation, Performance Management, and Financial Accounting compliant with the European directives.

Because 39.07% of the respondents are not graduates of a faculty in this field, we have tried to check if the general order is also validated in the case of the group made up of the respondents who have a university degree in this field. The conclusion is that the order is confirmed in the case of 3 of the 4 disciplines (the opinion regarding Forensic Accounting was not validated). At present, most faculties/departments in this field have included in their undergraduate or Master's curriculums the discipline of Forensic Accounting.

The requirements of the examination for access to the internship with a view to acquiring the title of chartered accountant must be formulated taking into account the knowledge and competences ensured by the initial (i.e. undergraduate) education process. Despite all this, the respondents perceive the existence of certain barriers hindering access to the profession.

The evaluation of the knowledge and competences taken into account in order to define the minimal requirements for the access examination involves the curriculums of the faculties in this field from the large university centres, especially those of the Academy of Economic Studies, Bucharest. Although there is a certain degree of convergence among the universities' curriculums, the de facto convergence is much weaker.

In descending order, the perception of the respondents regarding the existence of barriers hindering access to the profession involves the following competence domains: IFRS (86,71%), Consolidated Accounts (72,65%), Law (39,06%), the Taxation (34,37%), Audit (31,25%), Professional Ethics and Doctrine (30,46%), Forensic Accounting (29,68%), Management Accounting and Performance Management (13,28%), Evaluation (12,5%), and Financial Accounting compliant with the European directives (10,93%).

The perception of the existence of these barriers is the consequence of several factors:

- the trainees belong to different generations and were educated at different schools (for instance, those who enter the profession after several years after they've completed their undergraduate studies perceive more acutely the existence of certain barriers, as a result of the fact that they need to cover a significant part of the requirements through individual effort;
- those who graduated from universities other than the Academy of Economic Studies, Bucharest, perceive the existence of certain barriers in terms of the requirements connected with IFRS and Consolidated Accounts);

At the Bucharest Academy of Economic Studies' Faculty of Accounting and Management Information Systems, the undergraduate curriculum includes three disciplines which are meant to develop competences for the understanding and application of IFRS (Financial Accounting compliant with IFRS, Consolidated Accounting, and Accounting Policies and Choices).

The Faculty of Economics and Business Management of the Babeş-Bolyai University of Cluj-Napoca does not comprise in its undergraduate curriculum the disciplines dedicated to the study of IFRS. Elements specific to IFRS and consolidated accounting are developed as part of the disciplines of Financial Accounting and Advanced Accounting. The discipline Taxation is missing from the curriculum, although elements of the general theory regarding the fiscal system are dealt with as part of the discipline Public Finances. The competences in terms of professional ethics and deontology are covered by the disciplines Accounting Deontology and Business Ethics.

The Accounting and Management Information Systems Department of the Faculty of Economic and Administrative Sciences, Alexandru Ioan Cuza University, Iași, does not have in its curriculum the disciplines dedicated to the study of IFRS. Elements regarding consolidated accounting are developed as part of the Master's programmes. Certain elements regarding IFRS are developed by the teaching staff in the context of the teaching of the discipline of Financial Accounting (in compliance with the European directives), as part of some comparative analyses of accounting policies, without being explicitly present in the syllabuses. Detailed knowledge regarding fiscal legislation is developed as part of the discipline Enterprise Fiscal Operations Accounting. The disciplines Forensic Accounting and Accounting Ethics and Doctrine are not included in the undergraduate curriculum but rather in the Master's level curriculums.

At the specialization Accounting and Management Information Systems within the Faculty of Economics and Business Administration of the West University of Timișoara, the discipline Consolidated Accounting, although optional, is selected by most of the students. The disciplines dedicated to the study of IFRS are developed as part of the Master's programmes. Elements regarding the understanding and application of IFRS are developed, by the choice of the teaching staff, as part of the discipline Financial Accounting. The discipline Forensic Accounting is mandatory. The study of Ethics and Deontology of the Accounting Profession is not included in the undergraduate curriculum, but is developed as part of the Master's programmes. The candidates must update, most often through their own efforts, the legislation right up to the date of the access examination (for instance, fiscal legislation undergoes changes at the turn of each year, and they are included in the new approved subjects, which are, however, not covered by the initial (i.e. undergraduate) education;

Having the respondents meet the minimal requirements for access to the profession demanded by CECCAR, we have tried to check in what manner they appreciate that they possess reasonable knowledge, taking into account the list of competence domains provided by IES 2. Consequently, we asked the respondents to appreciate on a 1-5 scale the level of knowledge in the fields stipulated by IFAC for the complementing of the competences necessary for acquiring the title of chartered accountant.

The competence domain where most of the respondents appreciate themselves as having a level that's at least "good" is Accounting and Financial Reporting for Businesses (Ministry of Public Finance Order no. 3055/2009 with the subsequent amendments) (level 4). In fields such as Taxation, Management information Systems, CECCAR's Professional Standards, Human Resources, and Management Accounting, the level is satisfactory. However, of the total respondents, 43.75% appreciate themselves as having a level that's at least "good" in the case of Taxation, 41.40% in the case of Management Information Systems, and 32.81% in the case of CECCAR's Professional Standards. Much fewer are those who appreciate that they have a competence level that's at least "good" in the case of Management Accounting (26.15% of the total) and Human Resources (7.81%).

We note that, for this set of competences, the percentage of those who have a level greater than 3 increases from one internship year to the next, which means that CECCAR's educational programme, doubled by the practical experience, contributes to the betterment of the respondents' perception with regard to their own competences.

The competences in the case of which the respondents appreciate themselves as having at least a reasonable level are the ones used in their current activity, most of these respondents being employed in small and medium-sized entities or small accounting offices (SMPs). With regard to Human Resources competences, it could be a misperception, because the respondents confine this competence domain to keeping the employee register and to calculating their salaries and social contributions and related taxes.

Public Institutions Accounting and Bank Accounting are fields which a year ago were not included in the set of minimal requirements formulated by CECCAR for the internship access examination with a view to acquiring the title of chartered accountant. At the moment, these requirements are limited, although most of the faculties in this field have included these disciplines among the mandatory disciplines in their undergraduate curriculums. This is the main cause that explains the very poor self-assessment level in these two domains. Only 7 of the respondents work in a public institution and only 4 in a credit institution.

Most of the respondents accuse the fact that neither in the initial education period nor within the educational programme provided by CECCAR is enough attention paid to the development of knowledge and especially competences regarding organizations and businesses, business administration, and the accountant's role in a business. Certain respondents considered that the interdisciplinary approach is lacking. Many of the respondents do not understand why they should invest in the development of competences in domains such as international finance, financial markets, enterprise finance, given the fact that the outlook does not justify such an effort (these domains are considered as being relevant to professionals who work in large organizations, strongly integrated in the financial system and connected to international trade).

Corporate governance is perceived as a theoretical discipline par excellence, useful in the development of management culture rather than having consequences in terms of the operation of organizations and risk management. The place and role of the professional accountant in corporate governance is a topic in connection with which most of the respondents are unable to express themselves. This field is developed by most universities as part of their Master's programmes. Elements of corporate governance are the object of presentations as part of management, finance, and audit courses.

These competences regarding organizations and businesses are not included in the trainees' training programme but are part of CECCAR's national continuing professional development programme. Each year, chartered accountants must attend, as part of this programme, at least 40 hours of continuing professional training.

## **5. Conclusions**

The results of the survey confirm that a large percentage of the trainees perceive certain barriers to the access to the accounting profession due to differences in their educational background and consider that the training of the specialist accountants should be provided rather by CECCAR than by the universities. The access to the profession is perceived as being easier by the young trainees than by those who are part of the last age group. This could be explained by differences in motivation but also in higher support offered by universities in the case of younger trainees. At the same time, the young trainees perceive the added value ensured by the completion

of the internship programme provided by CECCAR less strongly than do those in the last age group. The disciplines most often indicated for not passing the access examination were, in this order: Law, The Fiscal System, Forensic Accounting, Accounting, Evaluation, Audit, and the Ethics and Doctrine of the Accounting Profession. These opinions are coherent with the ones shown by the respondents with regard to the perception of the existence of barriers to the access exam.

The self assessed competence level in fields such as accounting, the fiscal system, and IT was appreciated as at least "good" while the competences regarding organizations and businesses, IFRS, corporate governance, and financial markets was appreciated as deficient. The need for professional training was assessed based on the immediate practice and not on the expectations regarding career development or future evolutions in accounting practice. The trainees do not consider necessary any investment in competences that they cannot use immediately and at the level required by small and medium-sized businesses. Most of the respondents consider that the level of professional knowledge and competences acquired by chartered accountants in Romania as a result of passing the skills examination organized by CECCAR is superior to the competences required by the practical activity in a small or medium-sized enterprise (57.81%). Only 35.39% consider that these competences are adequate to the needs of small and medium-sized enterprises.. This implicates that results should be interpreted with caution and other factors (such as long term trends and expectations) should be considered in establishing the educational needs of future accountants.

The main limitation of our research is the fact that we have not considered the Bucharest-Ilfov region trainees. We intend to conduct a separate study for these trainees as we expect some of them to hold more complex and demanding jobs. In addition, most of them are graduates of ASE Bucharest and it is likely that their perception on these issues be different.

We intend to obtain additional information and relevant conclusions using superior statistical tools. We want to expand the field of research on the elements of competence perceived as having the greatest contribution to enhancing the usefulness of professional accountants.

## **6. Acknowledgements**

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(i)CECCAR = Corpul Experților Contabili și Contabililor Autorizați din România (i.e., The Body of Chartered Accountants and Licensed Accountants of Romania)

(ii)IFAC = Federația Internațională a Experților contabili (i.e., International Federation of Accountants)

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## THE RELEVANCE OF ACCOUNTING INFORMATION GENERATED BY THE APPLICATION OF IAS 29 RELATED TO SHAREHOLDERS CAPITAL

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**Abstract:** *The current economic environment evolves under globalization circumstances, and it stands for the markets' globalization trend. Under these circumstances, information has a primordial role. The content of the transmitted information has changed significantly. As part of the economic information, the accounting information evolved as well and its whole circuit has been continuously modernized in the rhythm of the global changes. Thus, it had to adapt to the swing of capital markets worldwide and to aim toward a unique international accounting language, for the taste and understanding of its users.*

*Historically, Romanian accounting records have been heavily influenced by the use of information for tax compliance purposes.*

*The primary function of financial/accounting details collection and recording process has been seen by many Romanian entities and management/staff within the entities (both State and private) as being for taxation compliance and taxation reporting purposes. As a result of this, the reported information has tended to reflect a "form over substance" disclosure, that is, greater importance is placed on having particular documents or recording something in a specific way, rather than in "accurately" reflecting the financial position of the enterprise at a point in time or indicating whether the results for the period are an appropriate representation of what has occurred.*

*Romanian accounting laws and regulations are not as such at fault, with the regulations providing for and encouraging treatments that are consistent in many ways with international accounting principles. Issues have however arisen on how laws and regulations are applied and have tended to reflect the background and outlook of Romanian accountants.*

*Up to 31 December 2003, Romania was considered to be a hyperinflationary economy, under the criteria of IAS 29 "Financial reporting in hyperinflationary economies". For Romanian statutory reporting, IAS 29 was not applied. In looking at financial statements where there are significant non-monetary items, users should keep this in mind and consider if there have been any revaluation of tangible and intangible assets and on what basis.*

*The objective of IAS 29 is to establish specific standards for entities reporting in the currency of a hyperinflationary economy, so that the financial information provided is meaningful. Our empirical analysis encompasses a hyperinflationary economy covering a wide variety of hyperinflationary conditions.*

**Keywords:** *hyperinflation, IAS 29, monetary items, accounting information*

*JEL Classification: M40, M41*

## **I. Introduction**

Starting with the financial year that ended at 31<sup>st</sup> of December 2012, the economical entities quoted on the Bucharest Stock Exchange were obliged to present their annual financial statements in accordance with the International Financial Reporting Standards (IFRS), in the way they were approved by the European Union, the legal requirement being stipulated by the Ordinance no. 881/2012 issued by the Finance Ministry and by the Ordinance no. 1286/2012 issued by the Finance Ministry for approving the Accounting Regulations in accordance with the International Accounting Standards, applicable for the companies holding stock exchange quotations.

Romanian entities are not on their first experience concerning the application of IFRS. Another precedent already exists – applying the Ordinance no. 94/2012 issued by the Finance Ministry for approving the Accounting Regulations harmonized with the 4<sup>th</sup> Directive of the European Economic Communities and with the International Accounting Standards, between 2001 and 2005, when the Romanian National Referential has been substituted for the one prescribed by OMFP no. 94/2012, by taking into consideration carrying out two out of three criteria regarding the turnover, total assets and number of employees.

The applying marked the beginning of a new stage in the life of the Romanian professional accountants through the new born challenges, although it was done in a „traditional” way, just like in the sketches of the Romanian writer Caragiale – „ok to get it revised, but without changing anything”. The adhering to the European Union meant also a step „aside” for the Romanian accounting, by giving up on the OMFP no. 94/2001 and applying accounting regulations in accordance with the European Directives; still, it is true that the substantial deviation that was already existing at the beginning of 2000 has disappeared.

The partial applying of the International Accounting Standards has had as a consequence the not applying of IAS 29, although, till the end of the financial year 2003, the Romanian accounting was characterized by hyperinflation. On 31<sup>st</sup> December 2012, this datum has changed – IFRS are being integrally applied, but the economic reality is different – almost 10 years had passed since Romania got out of the hyperinflation area.

## **II. Literature review / previous research**

Our study case’s premise starts from the economic reality of applying the IFRS starting with 31<sup>st</sup> of December 2012 and from the already existing materials in the specialty literature.

Since this debate is a new one – applying IFRS (and, in consequence, IAS 29) in Romania by the entities quoted on the capital market at 31<sup>st</sup> December 2012, we have not found any Romanian specialty literature that would have approached this subject until now. Also, the International specialty literature that approached this matter is extremely reduced.

Still, we can emphasize Higson's point of view<sup>12</sup> concerning IAS 29. Empirical evidence is presented on the efficacy of procedures summarised in IAS 29: Financial Reporting in Hyperinflationary Economies for estimating the loss in purchasing power from holding monetary items during hyperinflationary periods. His empirical analysis encompasses 32 hyperinflationary economies covering a wide variety of hyperinflationary conditions and spanning a period of more than 80 years. While the estimation procedures summarised in IAS 29 perform poorly under all the hyperinflationary conditions encompassed by our sample, they are especially poor when the rate of inflation accelerates towards the end of a relatively short hyperinflationary period. For these latter economies, the best estimate of the actual purchasing power loss is typically only a small fraction of the figure obtained under the IAS 29 procedures. For hyperinflations of longer duration, the IAS 29 procedures return estimated purchasing power losses that are typically around 10% larger than our best estimate of the actual losses. Higson also derives and empirically tests a general class of 'two point' estimation formulae that make more efficient use of the sparse information set on which the IAS 29 estimation procedures are based.

The results obtained from this procedure are encouraging and suggest it is possible to obtain reliable estimates of purchasing power losses using only sparse information sets provided realistic assumptions are made about the way monetary holdings respond to variations in the purchasing power of the currency.

### III. Research methodology

According to IAS 29 and IAS, the financial statements of an entity that reports in the currency of a hyperinflationary economy should be stated in terms of the measuring unit current at the balance sheet date; therefore, the non-monetary items should be restated by applying a general price index at the acquired or contribution date. The Standard states the fact that an economy is being considered hyperinflationary when, among other factors, the cumulative inflation rate over three years approaches, or exceeds, 100%.

In order to observe the application of IAS 29 stipulations by the Romanian entities that are quoted on the Bucharest Stock Exchange, we have selected a sample of five companies: Biofarm SA, Boromir Prod SA, Compa SA, Electroputere SA and Farmaceutica Remedia SA. The reason we chose these five is because they are the first five companies that published their preliminary financial statements at 31st December 2012 on the Bucharest Stock Exchange website, [www.bvb.ro](http://www.bvb.ro).

### IV. Research results

The continuous decrease of inflation and other factors connected to the characteristics of the Romanian economical environment, indicates that the economy, which had its functional currency adopted by the entities quoted on the Bucharest Stock Exchange, ceased to be under hyperinflation starting with 1<sup>st</sup>

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<sup>12</sup> Higson, A., Shinozawa, Y., & Tippet, M. (2007). *IAS 29 and the cost of holding money under hyperinflationary conditions*. *Accounting and Business Research*, 37(2), 97-99,101-107,111,113-114,119-121. Retrieved from <http://search.proquest.com/docview/198109635?accountid=8107>

January 2004. This way, the amounts stated in the monetary unit at 31<sup>st</sup> December 2003 are treated as a basis for the valuation in the financial statements.

In the context of applying professional judgment, only three categories remain in the scope of inflating valuations: property, plant and equipment, share capital and reserves at 31<sup>st</sup> December 2003. Given that subsequent laws (from 31<sup>st</sup> December 2003 onwards) prescribed the revaluation of property, plant and equipment at fair market value, the application of revaluation by inflating becomes redundant.

*What happened to the value of the share capital?* It was more than often increased with revaluation surpluses before 31<sup>st</sup> December 2002, for the purpose of keeping a fair view on the financing sources. These revaluations under the prescriptions of IAS 29, must be written off from the value of the share capital, reclassifying them as retained earnings. The problem is that under Law no. 82 / 1991, accounting documents must be kept for ten years, thus giving rise to a high risk of being unable to perform the restatements, in the absence of proper documentation.

The accounting treatment for *inflating the share capital* is:

<b>118</b>	<b>=</b>	<b>1028</b>
<b>Retained earnings from the first time adoption of IAS 29</b>		<b>Adjustments to share capital</b>

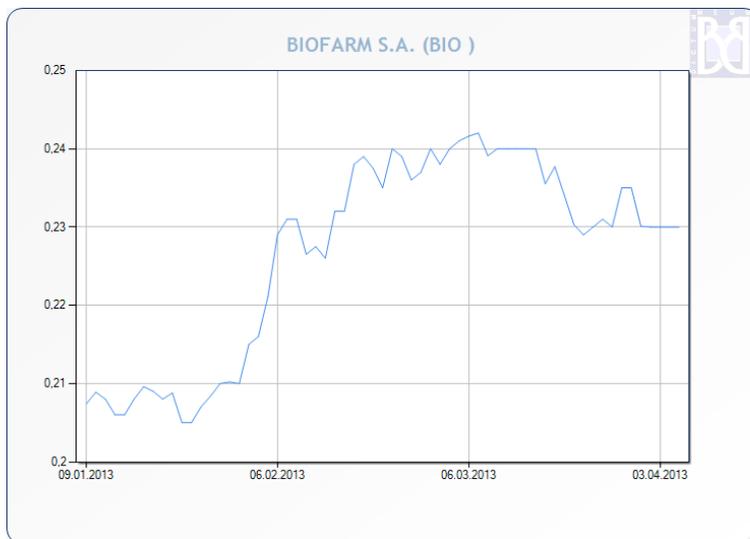
The effect is that the share capital is increased with the inflation differences, which in turn express nominal value loss of the currency. These differences are subsequently covered by the same extra capital resulting from the inflation. This way, the operation is reversed and at this point we question the motivation of performing the restatement in the first place.

There is a distinct possibility that a shareholder requests to withdraw from the capital structure of the entity, between the moment of submitting the financial statements, which contain the inflated capital, and the actual moment of covering the retained loss from the restatement. In this situation, *which is the valuation used to assess the shareholder's equity?* Based on the adjustment made on the presumption of hyperinflation, the valuation should be the inflated amount (which, as a parenthesis, can exceed the total value of share capital in existence before the inflation). An early conclusion can be drawn from here that the inflation of share capital can lead to the presentation of redundant information and to the representation of the capital structure in a manner far from being true and fair.

From our sample of five entities, we have found that three of them did not perform a share capital inflation: Farmaceutica Remedia SA, Compa SA and Electroputere SA. The remaining two, Biofarm SA and Boromir Prod SA presented, in their preliminary financial statements as at 31<sup>st</sup> December 2012, adjustments to share capital resulting from inflation, as follows:

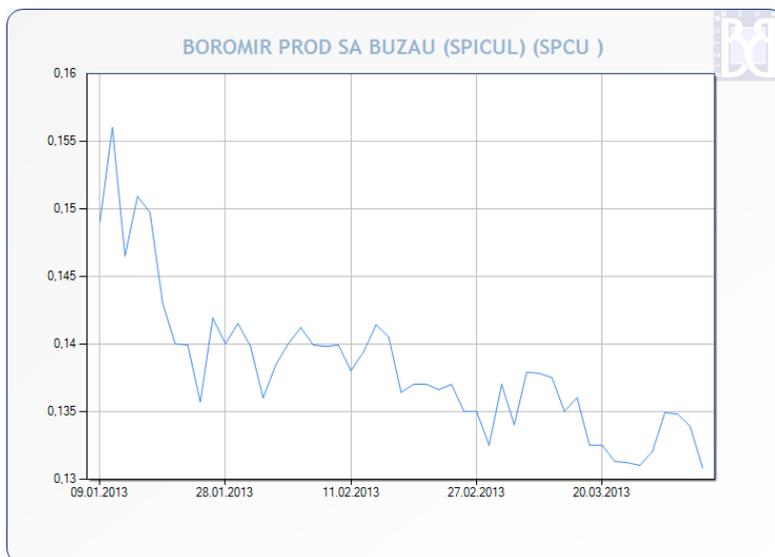
- i) Biofarm SA had a share capital of RON 109,486,150 as at 31<sup>st</sup> December 2012, and adjustments amounting to RON 24,983,008 representing adjustments to share capital based on the rate of inflation.
- ii) Boromir Prod SA had a share capital of RON 23,306,374 as at 31<sup>st</sup> December 2012, and adjustments amounting to RON 34,396,893 representing adjustments to share capital based on the rate of inflation.

In order to be able to draw a conclusion regarding the relevance of inflating the share capital as per IAS 29, we have followed the fluctuation of the exchange rate from the date of the preliminary financial statements at 31<sup>st</sup> December 2012, until 15<sup>th</sup> February 2013, as per the graphics below:



**Graphic no. 1** – Fluctuation of the exchange rate from the date of the preliminary financial statements

Source: <http://www.bvb.ro/ListedCompanies/EmitGrafic.aspx?s=BIO>



**Graphic no. 2** – Fluctuation of the exchange rate from the date of the preliminary financial statements

Source: <http://www.bvb.ro/ListedCompanies/EmitGrafic.aspx?s=SPCU>

It can be observed that a significant value resulting from the restatement of the share capital did not impact in large fluctuations in respect of the stock exchange rate.

## V. Conclusions

The conclusion of this paper is that the very relevance of the accounting information is questioned in the matter of inflating share capital as per IAS 29, along with the utility of such information.

There are also important costs with updating the share capital value with the National Office of the Commerce Registry and with the re-actualization, which is in fact supported by the going concern principle, meaning that the shareholders have provided financing sources which can be considered as being stated in real and not nominal currency terms.

The very same reporting framework indicates, in IAS 1, paragraph 23:

*In the extremely rare circumstance that the leadership concludes that comply with a requirement set out in a standard or interpretation, leading to confusion as to conflict with the objective of financial statements established in the Conceptual Framework, but the regulatory framework will ban fail to implement this requirement, the entity must reduce as far as practicable those aspects of performance that perceived as causing confusion by revealing the following information:*

- a. *The title of the Standard Interpretation or concerned, the nature of the invitation, as well as why management has concluded that compliance with the same confuse so that would conflict with the objective of the financial statements set out in the Framework;*
- b. *for each year presented, adjustments to each item of financial statements that management has concluded that it would take to achieve the true picture.*

In conclusion, some entities' management did not choose to consider the effects of hyperinflation on the share capital, because this aspect is, in their opinion, an accounting adjustment which does not reflect the legal nature of the capital holdings and which can give rise to confusion among the shareholders, as to the differences in share capital which would result in comparison to the statutory financial statements.

## VI. References

1. \*\*\* *International Financial Reporting Standards*, CECCAR Edition, 2011
2. \*\*\* *Accounting Law no. 82/1991*, with the latest updates
3. \*\*\* *Ordinance no. 881/2012 issued by the Finance Ministry*
4. \*\*\* *Ordinance no. 1286/2012 issued by the Finance Ministry* for approving the Accounting Regulations in accordance with the International Accounting Standards, applicable for the companies holding stock exchange quotations.
5. \*\*\* [www.bvb.ro](http://www.bvb.ro)

## **SOME DISCLOSURE ASPECTS REGARDING CONSOLIDATED FINANCIAL STATEMENTS**

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**Abstract:** *The purpose of this article is to analyze the current state of consolidated reporting practice harmonization concerning the choice of presenting the income statement, the changes in equity, the methods used for presenting the cash flow statement, the extant methods for evaluating and reporting goodwill, the extant methods in which jointly controlled entities are accounted in the consolidated financial statements, or the choice for recognizing investments in subsidiaries, jointly controlled entities and associates in the separate statements of the parent company. In order to achieve our goal we selected the first 10 groups, in order of their capitalization value, that were listed on each of the following capital markets: London Stock Exchange, NYSE Euronext (Paris Stock Exchange) and Deutsche Börse (Frankfurt Stock Exchange) and we analyzed, in a qualitative and in a quantitative manner, for a period of six years starting with 2007, their consolidated financial statements with the design to establish exactly which of the aspects stated in the International Financial Reporting Standards were being used for the items presented above. In order to complete the empirical research part of the paper that addresses from a comparative perspective the evaluation of the degree of material harmony between the reporting practices of groups listed on the three stock exchanges above-mentioned, we used statistical and mathematical methods represented by the I Index first described by Van der Tas. Taking into account the fact that since 2005 all listed companies on the European stock exchanges were required to adopt the international accounting standards for their consolidated financial disclosures, the degree of material harmony was studied only in reference to those requirements that presented two methods or possibilities of disclosure. Our findings suggest that the groups analyzed present a high degree of material harmonization with respect to the reporting practices considered, especially in the last three years.*

**Keywords:** *consolidated financial statements; disclosure; IAS/IFRS; accounting harmonization.*

**JEL classification:** M41

### **1. Introduction**

The preparation and presentation of consolidated financial statements has become, over time, a mandatory requirement for all group companies worldwide. This practice was first seen in USA and then was taken over by groups of companies in Europe. Nowadays, in Europe, listed groups should prepare a set of consolidated financial statements based on IFRS. This is required by EU Regulation no.1606/ 2002, which states that “member states are required to take appropriate measures to ensure compliance with international accounting standards” (EC, 2002). The obligation of listed groups to prepare consolidated financial statements based on IFRS, since

2005, comes as a first step, but also as a support for the efforts of regulators to implement a single set of international accounting standards accepted and used globally.

This paper brings into focus the analysis of some aspects which can give us a clearer picture of the presentation of information in the consolidated financial statements of listed companies in 3 stock exchanges with great impact on the European capital market, namely London Stock Exchange, NYSE Euronext and Deutsche Börse Group. The reason behind our choice of selecting the sampled data is described in the case study presented in third section of the paper.

First, we select the prior research findings, namely the literature review regarding the central theme of the article. Then, this research continues as follows: in the second section we present a brief description of the international accounting regulations concerning consolidated financial statements. In the third part, the empirical analysis of the disclosure of consolidated financial statements of listed groups is detailed in order to shape an idea about some important aspects for which IFRSs offer a choice. In the fourth part we expose our conclusions based on the findings in the case-study.

## **2. Literature Review**

We consider that two streams of literature are relevant to our study: studies on the accounting harmonization process and studies investigating the consolidated financial statements and their disclosure according to the international or national regulations.

International accounting harmonization and convergence represent one of the most debated issues both in research literature and in practice. Harmonization scope allows making comparisons of international financial accounts easier, faster and cheaper (Carlson, 1997). Thus, in order to provide more transparent and comparative information, the accounting standards setters join their forces for issuing a single set of standards applicable to all entities around the world. The process of harmonization and convergence plays an important role for the accounting systems and was in the attention of researchers since early '80s. The prior studies having as central theme the measure of accounting harmonization can be grouped in two main categories: studies that measure the formal harmonization (de jure harmonization) and studies that measure material harmonization (de facto harmonization). The first category includes studies that quantify the degree of compatibility between the international accounting standards, IAS/IFRS and national accounting standards. In this case, the literature include, among others, the studies of Tay and Parker (1990), Rahman et al. (1996), Aisbitt (2002), Garrido et al. (2002), Fontes et al. (2005), Ding et al. (2007). The second category consists of research papers aimed at analyzing the degree to which the provisions contained in international accounting standards IAS/IFRS are actually implemented in the practice, or in the preparation of financial statements. In this category we can mention the following studies: Canibano and Mora (2000), Parker and Morris (2001), Rahman et al. (2002), Delvaile et al. (2005), Aisbitt (2006), Baltariu and Cirstea (2012).

Regarding the design and the presentation of consolidated financial statements, we found analyzed in the research literature four main theories, that have an impact on the disclosure of information in consolidated financial statements (Abad et al., 2000

Baluch et al., 2010: 1-12; Grossi and Gardini, 2012: 1-28; Müller, 2010: 56-63). All these research studies brought an added value to the topic of consolidated financial statements reporting.

### **3. International Referential for Consolidated Financial Statements**

From the very beginning, the IASB has played an important role and had a substantial contribution to the international accounting harmonization process. The main objective of the regulatory body is to develop a single set of high quality, understandable, enforceable and globally accepted financial reporting standards based upon clearly articulated principles. There have been issued until now a number of 41 IASs and 13 IFRSs applicable to profit-oriented entities. Since 2001, almost 120 countries have required or permitted the use of IFRSs for their companies listed on the stock markets pioneering the way towards a global accounting harmonization. This trend of using a single set of accounting standards for reporting brings us to mind the following question “Can all accountants worldwide speak the same language?” (Rezaee et. al, 2010). Actually, the regulatory body committed to reduce the differences concerning the preparation and presentation of the financial statements, doing this because the financial reporting plays a key role in decision making. So, in other words, the financial statements are the main vehicle of information available for all users (Muniain, 2003). The financial statements are considered a key accountability tool for different users. Increasing relevance of financial statements is due to the existence of evidence of limited financial resources whose use must take into account social needs, the interest of stakeholders, the citizen rights, the quality and efficiency of the public services (Nistor and Stefanescu, 2012). The International standards underlying the preparation and presentation of consolidated financial statements are now: IFRS 10, 11 and 12. These were issued in 2011 and are applicable from 1 January 2013, actually replacing IAS 27, 28 and 31 which until 2013 were the basis for the preparation and presentation of consolidated financial statements of listed groups. Below we will briefly present the objective of each standard that was the basis of the preparation and presentation of consolidated financial statements of groups subject to our empirical study, namely IAS 27, 28 and 31.

Thus, IAS 27 has the twin objectives of setting standards to be applied: in the preparation and presentation of consolidated financial statements for a group of entities under the control of a parent; and in accounting for investments in subsidiaries, jointly controlled entities, and associates when an entity elects, or is required by local regulations, to present separate (non-consolidated) financial statements. IAS 27 Consolidated and Separate Financial Statements outlines when an entity must consolidate another entity, how to account for a change in ownership interest, how to prepare separate financial statements, and related disclosures. Consolidation is based on the concept of “control” and changes in ownership interests while control is maintained are accounted for as transactions between owners as owners in equity. (IAS 27.1)

IAS 28 Investments in Associates outlines the accounting for investments in associates. An associate is an entity over which an investor has significant influence, being the power to participate in the financial and operating policy decisions of the investee (but not control or joint control), and investments in associates are, with limited exceptions, required to be accounted for using the equity method. IAS 28

applies to all investments in which an investor has significant influence but not control or joint control except for investments held by a venture capital organization, mutual fund, unit trust, and similar entity that are designated under IAS 39 to be reported at fair value with fair value changes recognized in profit or loss (IAS 28.1).

IAS 31 Interests in Joint Ventures sets out the accounting for an entity's interests in various forms of joint ventures: jointly controlled operations, jointly controlled assets, and jointly controlled entities. The standard permits jointly controlled entities to be accounted for using either the equity method or by proportionate consolidation. IAS 31 applies to accounting for all interests in joint ventures and the reporting of joint venture assets, liabilities, income, and expenses in the financial statements of venture owners and investors, regardless of the structures or forms under which the joint venture activities take place, except for investments held by a venture capital organization, mutual fund, unit trust, and similar entity that (by election or requirement) are accounted for as under IAS 39 at fair value with fair value changes recognized in profit or loss (IAS 31.1).

## **4. Empirical Analysis – Case Study**

### **4.1. Description of Study-Sample**

As we can see in table 1, the groups included in our study were selected from the largest European capital markets, London Stock Exchange, Paris Stock Exchange and Frankfurt Stock Exchange, respectively. According to the European Federation of Stock Exchanges – FESE – taking into consideration the criteria of trade value and of turnover value, in January 2013, London Stock Exchange, NYSE Euronext and Deutsche Börse Group (Frankfurt Stock Exchange) were the largest stock exchanges in the European capital market (European Equity Market Report, 2013). From NYSE Euronext we selected Paris Stock Exchange as we considered it having the largest size and capitalization values. Afterwards, from each stock exchange we selected the first ten groups of companies included in the trading indexes FTSE100 (London Stock Exchange), NYSE Euronext100 (Paris Stock Exchange) and DAX30 (Frankfurt Stock Exchange) and considered them in order of their capitalization value. From the sample we excluded the groups which operate in the financial sector. Table 1 presents the remaining sample of groups included in our analysis. In order to extract the necessary information for our study, we consulted the documents containing the consolidated financial statements of the groups and the parent company individual financial statements (in most of the cases). The area of documents studied was comprised of the Annual Reports, the Reference Documents and the Financial Reports which were published on the groups' websites. All the groups considered were obliged to comply with the international financial reporting standards regarding their consolidated disclosures. The period analyzed included six years, namely: 2007, 2008, 2009, 2010, 2011 and 2012.

**Table 1: Study Sample**

No.	Company Name		
	<i>London Stock Exchange</i>	<i>Paris Stock Exchange</i>	<i>Frankfurt Stock Exchange</i>
1.	Vodafone Group plc.	Sanofi	SAP AG
2.	BP Plc.	Total	Siemens AG
3.	GlaxoSmithKline Plc.	L'Oréal	Bayer AG
4.	British American Tobacco Plc.	LVMH Moët Hennessy-Louis Vuitton	Basf SE
5.	Royal Dutch Shell Plc.	GDF Suez	Daimler AG
6.	SABMiller Plc.	Danone	BMW Group
7.	Diageo Plc.	EADS N.V.	Deutsche Telekom AG
8.	Rio Tinto Plc.	Schneider Electric	E.ON SE
9.	BHP Billiton Plc.	Air Liquide	The Linde Group
10.	AstraZeneca Plc.	EDF Electricité De France	Volkswagen AG

Source: Authors Analysis

#### 4.2. Research Methodology and Results

This article approaches the theme of material (de facto) accounting harmonization within consolidated financial disclosures from an international perspective. De facto accounting harmonization is studied with respect to several elements and methods which will be presented in short in the next paragraph. The elements which we selected for analysis refer to disclosure requirements which are mandatory but present two possible methods of application. The choice of the method to be used in order to fulfil the disclosure requirement belongs to the entities. These methods regard the presentation of consolidated financial statements; the practices with respect to evaluation and reporting of goodwill and of joint ventures, more specifically of jointly controlled entities, known also as joint arrangements from IFRS 12 Disclosure of Interests in Other Entities (issued by the IASB in May 2011); and the evaluation and reporting of investments in subsidiaries, joint ventures and associates in the parent company individual financial statements. As we mentioned above, our analysis comprises several elements which are synthesized as follows:

- Element number 1 (E1): the disclosure requirement regarding the presentation of results of operations, as stated in IAS 1 Presentation of Financial Statements, which currently allows groups the choice of disclosure of either *a single, continuous statement* (method 1), or two separate statements – *an income statement* and *a statement of comprehensive income* (method 2).
- Element number 2 (E2): in the case of presenting the results in two separate statements, the disclosure of other comprehensive income can be done either in *a statement of comprehensive income* (method 1), or *in a statement of recognized income and expense directly in equity* (method 2).
- Element number 3 (E3): the disclosure requirement regarding changes in equity, which is stated in IAS 1. In this case we observed that some groups preferred to disclose the information regarding the changes that had occurred in equity in a separate statement – *the statement of changes in*

*equity* (method 1) – while other groups chose to disclose this information only in the *Notes to Consolidated Financial Statements* (method 2).

- Element number 4 (E4): as stated in IAS 7 Statement of Cash Flows, this statement may be drafted by using either *the direct method* (method 1), which shows each major class of gross cash receipts and gross cash payments, or *the indirect method* (method 2), which adjusts accrual basis net profit or loss for the effects of non-cash transactions.
- Element number 5 (E5): regarding the practice concerning the evaluation and reporting of goodwill, IFRS 3 Business Combinations allows the choice between *the full goodwill approach* (method 1) and *the purchase goodwill approach* (method 2). In the case of full goodwill approach, the total amount of goodwill (the parent company share, as well as the minority interests incumbent value) is taken into consideration and evaluated and the initial recognition is done based on the price paid by the acquiring company for purchasing the net assets of the acquire. Under the purchase approach, goodwill is presented as being equal to the amount (price) paid by the acquiring entity, considered at fair value, minus the fair value of the net assets of the acquired.
- Element number 6 (E6): with respect to interests in jointly controlled entities, the groups have a choice between: *the proportionate consolidation method* (method 1), whereby the group's proportionate interest in the assets, liabilities, revenues and expenses of jointly controlled entities are recognized within each applicable line item of the financial statements; or *the equity accounting method* (method 2), which involves recording the investment initially at cost to the group, including any goodwill on acquisition and adjusting in subsequent periods the carrying amount of the investment as to reflect the group's share of the jointly controlled entity' post-acquisition profit or losses and its share of post-acquisition comprehensive income.
- Element number 7 (E7): refers to the parent company individual financial statements in which the investments in subsidiaries, jointly controlled entities and associates are allowed to be recognized either *at fair value* (method 1), as stated in IFRS 3, or *at cost* (method 2), as stated in IAS 27 Consolidated and Separate Financial Statements.

The research methodology of the present paper includes both qualitative and quantitative research methods. Among the qualitative research methods the analysis of documents, the analysis of consolidated financial statements of groups included in the study-sample, the comparative and the interpretative methods are distinguished. As to the quantitative research methods, in order to complete the empirical research part of the paper that addresses from a comparative perspective the evaluation of the degree of material harmony between the reporting practices of groups listed on three stock exchanges, namely London Stock Exchange, Paris Stock Exchange and Frankfurt Stock Exchange, we used statistical and mathematical methods represented by the *I Index* first described by Van der Tas, 1988: 165-168. The *I Index* is a measurement method of financial reporting practice harmonization at an international level, which focuses on “the degree to which the companies in one country apply the same or only a limited number of alternative accounting methods, compared to the companies in another country” (Van der Tas, 1988: 165). Taking into account the fact that since 2005 all listed companies on the European stock exchanges were required to adopt the international accounting

standards for their consolidated financial disclosures (EC Regulation no. 1606/2002), the degree of material harmony was studied only in reference to those requirements that presented two methods or possibilities of disclosure. The I Index does not take into account multiple reporting and since our study encompasses groups of companies listed on three different stock exchanges, we considered the I Index developed for the case of more than two countries, namely the I Index with correction factor. The formula of the I Index with correction factor is as follows:

$$I^x = \left( \sum_{i=1}^n (f_i^1 x f_i^2 x \dots x f_i^m) \right)^{1/(m-1)} \quad (1)$$

Where:

$f_i$  = relative frequency of method  $i$  in country  $m$ ;  $m$  = number of countries;  $n$  = number of alternative accounting methods.

The values of I index can fluctuate between 0 (no harmony) and 1 (all companies from all countries included in the analysis are using the same reporting practice).

The results of the analysis are presented in table 2, table 3 and table 4. Tables 2 and 3 contain the results of analysis of the consolidated financial statements of groups included in the study-sample separated in two periods of time each comprising three years, 2007-2009 and 2010-2012 respectively. On each row of the two tables is presented the absolute number of groups which selected one of the two methods in order to disclose the elements that we described in the previous paragraph. The absolute number of groups is presented for each stock exchange and for each year separately. Table 4 presents on each of its rows the calculated value of the I Index with correction factor, namely the degree of material harmony extant between all groups included in this study regarding each of the reporting practices that we described above.

**Table 2:** Results of Analysis Regarding the Form and Content of CFS 2007-2009

Element	Method	Period								
		2007			2008			2009		
		LSE	PSE	FSE	LSE	PSE	FSE	LSE	PSE	FSE
<i>Total</i>		10	9	10	10	10	10	10	10	10
E1	M1	2	7	1	1	7	1	1	1	0
	M2	8	2	9	9	3	9	9	9	10
<i>Total</i>		8	2	9	9	3	9	9	9	10
E2	M1	0	0	0	0	0	0	5	5	6
	M2	8	2	9	9	3	9	4	4	4
<i>Total</i>		10	9	10	10	10	10	10	10	10
E3	M1	2	7	6	1	8	6	6	10	10
	M2	8	2	4	9	2	4	4	0	0
<i>Total</i>		10	9	10	10	10	10	10	10	10
E4	M1	6	0	0	5	0	0	4	0	0
	M2	4	9	10	5	10	10	6	10	10
<i>Total</i>		10	9	10	10	10	10	10	10	10
E5	M1	0	0	0	0	0	0	0	0	0
	M2	10	9	10	10	10	10	10	10	10
<i>Total</i>		8	9	9	8	10	9	9	10	9
E6	M1	2	6	2	3	7	2	3	8	2
	M2	6	3	7	5	3	7	6	2	7
<i>Total</i>		10	8	2	10	9	1	10	9	2

Element	Method	Period								
		2007			2008			2009		
		LSE	PSE	FSE	LSE	PSE	FSE	LSE	PSE	FSE
E7	M1	0	0	0	0	0	0	0	0	0
	M2	10	8	2	10	9	1	10	9	2

Source: Authors Analysis

**Table 3:** Results of Analysis Regarding the Form and Content of CFS 2010-2012

Element	Method	Period								
		2010			2011			2012		
		LSE	PSE	FSE	LSE	PSE	FSE	LSE	PSE	FSE
<i>Total</i>		10	10	10	10	10	10	10	10	10
E1	M1	1	1	0	1	1	0	1	1	0
	M2	9	9	10	9	9	10	9	9	10
<i>Total</i>		9	9	10	9	9	10	9	9	10
E2	M1	9	6	7	9	6	8	9	6	8
	M2	0	3	3	0	3	2	0	3	2
<i>Total</i>		10	10	10	10	10	10	10	10	10
E3	M1	10	10	10	10	10	10	10	10	10
	M2	0	0	0	0	0	0	0	0	0
<i>Total</i>		10	10	10	10	10	10	10	10	10
E4	M1	5	0	0	5	0	0	5	0	0
	M2	5	10	10	5	10	10	5	10	10
<i>Total</i>		10	10	10	9	10	10	10	10	10
E5	M1	0	0	2	0	0	2	0	0	2
	M2	10	10	8	9	10	8	10	10	8
<i>Total</i>		9	10	9	9	10	9	9	10	9
E6	M1	3	7	2	3	7	2	3	7	2
	M2	6	3	7	6	3	7	6	3	7
<i>Total</i>		10	9	1	10	9	1	10	9	1
E7	M1	0	0	0	0	0	0	0	0	0
	M2	10	9	1	10	9	1	10	9	1

Source: Authors Analysis

**Table 4:** I Index

Element	I <sup>*</sup> Index ( )					
	2007	2008	2009	2010	2011	2012
E1	0,42	0,50	0,90	0,90	0,90	0,90
E2	1,00	1,00	0,51	0,68	0,73	0,73
E3	0,41	0,35	0,77	1,00	1,00	1,00
E4	0,63	0,71	0,77	0,71	0,71	0,71
E5	1,00	1,00	1,00	0,89	0,89	0,89
E6	0,48	0,45	0,40	0,46	0,46	0,46
E7	1,00	1,00	1,00	1,00	1,00	1,00

Source: Authors Analysis

## 5. Conclusions and Limits of the Study

Based on the results obtained in the analysis, which were presented in the previous section in tables 2, 3 and 4, we can synthesize certain conclusions regarding the

degree of material harmony of reporting practices taken into consideration for the consolidated disclosures of the groups included in the sample. First of all, we can remark that with few exceptions, the degree of material harmonization was constant for each element taken into consideration throughout the period analyzed. The first exception regards the accrual of the value of the degree of material harmony for the first analyzed element, the disclosure requirement of results of operations. Since 2007 until 2012 the values of I Index with correction factor increased as we can see in table 4. We consider this change due to the fact that a revised form of IAS 1 was issued in September 2007, its requirements starting to be effective for annual periods beginning on, or after the 1<sup>st</sup> of January 2009. IAS 1 currently allows groups the choice of disclosure of either a single, continuous statement of comprehensive income, or two separate statements – an income statement and a statement of comprehensive income. After the revision of the standard more groups harmonized their practice of presentation of the income and comprehensive income. Another exception refers to the second element included in our analysis, the presentation of group results in two separate statements, the disclosure of other comprehensive income being done either in a statement of comprehensive income, or in a statement of recognized income and expense directly in equity. The first two values of I Index, for 2007 and 2008, are 1, this being due to the fact that all the groups analyzed which presented 2 separate income statements, were using for comprehensive income disclosure the statement of recognized income and expense directly in equity. Starting 2009, in the consolidated financial statements of some of the groups analyzed the disclosure of this item was done through the statement of comprehensive income. Thus, the value of I Index changed to 0,51. In 2011 and 2012, we can remark that the values of I Index increased again, this time due to the fact that a lot more of the groups disclosed their comprehensive income in the statement of comprehensive income. This can be considered another of the consequences of the revision of IAS 1. With respect to the third element of our analysis, we observe a constant increase in the values of the I Index with correction factor. An explanation of this increasing trend is the choice of groups to start presenting the disclosures regarding changes in equity directly in the statement of changes in equity, and only more detailed information in the Notes to Consolidated Financial Statements. With regard to the other four elements of our analysis we can remark that the values of the I Index with correction factor are almost constant throughout the entire period analyzed, with a larger number of groups showing preference for the indirect method of presenting the statement of cash-flow, the purchase goodwill approach, or for using the equity accounting method for the evaluation and presentation of investments in jointly controlled entities. The fact that in 2008 a review of IFRS 3 and IAS 27 took place, the full goodwill approach being thus introduced as a method of goodwill disclosure, did not have a great effect on the material harmony of goodwill disclosure practice within the groups analyzed, only two of them making use of the new method since 2010. Also, we can observe that the I Index's values for the seventh element analyzed are 1 starting 2007 until 2012, all the groups which presented the parent company individual financial statements in their annual reports preferring to evaluate the investments in subsidiaries, jointly controlled entities and associates at cost.

Our paper makes a contribution to the extant literature on material harmonization of the consolidated financial reporting practice by examining the current state of de facto harmonization regarding several reporting practices in the consolidated

financial statements of 30 groups listed on three different stock exchanges. Our findings suggest that the groups analyzed present a high degree of material harmonization with respect to the reporting practices considered, especially in the last three years, 2010, 2011 and 2012. The limitations of our research – the small number of groups sampled, the use of a single quantitative method for the analysis – do not allow us to draw any general conclusions with respect to the degree of material harmony extant between all the listed groups on the respective capital markets. These limitations, however, are being considered as challenges that can be addressed in our future research.

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## BUSINESS MODELS FOR TAX AND TRANSFER PRICING PURPOSES

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**Abstract:** *In order to remain competitive, the multinational enterprises (MNEs) are forced by the globalization phenomenon (which manifestation has become more and more stringent) to analyze continuously their effectiveness. In this respect, the structure of the business represents an element which might have an important impact for the enterprises overall results. This is why, in the last decades, the MNEs granted special attention to business structures and put significant efforts in business restructurings, where the case, with the scope to keep the efficiency and to remain on the market. Generally, the operational business restructuring process follows one of the business model globally developed, namely manufacturer or sales business models. Thus, according to the functions performed, assets used and risks assumed, the entities within the group are labeled into limited risk units (such as toll manufacturer or commission agent), medium risk (contract manufacturer, commissionaire, stripped distributor) or high risk units (fully fledged manufacturer, fully fledged distributor). Notwithstanding the above, there should be emphasized that the operational business restructuring has to be undertaken with maximal care, as it might have important fiscal impact. Having this regard, the purpose of the present investigation is to provide, from a tax and transfer pricing point of view, a systematic and structured analysis of the generally characteristics of business models (manufacturer and sales business models) used by multinational enterprises in the process of business reorganization, with the scope to increase their performance and the sustainable competitive advantages. Thus, by using the fundamental (theoretical) and qualitative research type, this paper is aiming to present the most important characteristics of each business model (general overview of each model, the principal risk assumed, the usual transfer pricing method used for the remuneration of intra-group transactions). The principal investigation techniques (research methods) used were the literature review and the analysis of international regulation in the taxation field. The present paper follows the positive research perspective.*

**Key words:** *business restructuring, business model, manufacturer models, sales models, transfer pricing*

**JEL classification:** *H20, H25, M16*

### Introduction

In the present globalised economy, the international companies (regardless of products or sectors) face the pressure of increasing competition. Thus, they are bound to examine on a continuous basis the effectiveness of their business structures and to adjust their activity to these changing circumstances. As a consequence, the business restructurings undertaken by multinational enterprises have been a widespread phenomenon in recent decades because the globally competition forces them to maximize synergies and increase related efficiencies.

The need for an international company to change / to restructure its activity is generally underlay by both internal and external factors, such us: increasing demand in certain territory, changing customer demand, proximity to the sale market, various cost related factors (transportation cost, labor cost, energy cost, raw materials cost), savings from economies of scale, the need to increase the productivity by decreasing the costs, the need for specialization, centralization of functions etc.

Due to the development of global business models, the reorganization operations affecting an entity's industrial, commercial and supply chain processes has become increasingly common in the last years while taking various forms. These kind of industrial and commercial restructurings have complex and (often) significant consequences for international tax purposes, although tax considerations by themselves are generally not the principal driver for the reorganization.

From a transfer pricing point of view, the business reorganizations are defined as "cross-border redeployment by a multinational enterprise of its functions, assets and/or risks" (OECD Report – Transfer Pricing aspects on Business Restructurings). This paper is aiming to describe, from a tax and transfer pricing point of view, the general characteristics of the business models used in present times by multinational enterprises. We choose to analyze this subject as we consider this is a hot topic in the present globalised economy, due to the fact that business reorganizations might have a dramatic impact on the allocation of the taxable profits of a multinational enterprise among the countries in which it activates.

### **Research methodology**

The purpose of the present investigation is to describe, from a tax and transfer pricing point of view, the general characteristics of the business models used by multinational enterprises. In this paper, the fundamental research type was applied and the deductive research method was used (meaning that general conclusions were extracted based on available data).

One of the investigation techniques used was the literature research. We analyzed the international scientific literature on accounting and taxation topics, starting from older papers (Hirshleifer, 1956 & 1957; Dean; 1955 and Cook; 1955) to newest ones (Johnson, Christensen & Kagermann, 2008; Bakker, 2009). The papers observed were found in the following databases: SpringerLink, Jstor, Emerald and ScienceDirect. As a research key, we tried to found papers discussing about "business restructuring", "business reorganization", "transfer pricing impact in case of business restructuring" etc.

Another investigation technique used was the analysis of international regulations in taxation filed (OECD reports or discussion papers on Transfer Pricing topic: Transfer Pricing Guidelines for multinational enterprises and tax administration; Transfer Pricing aspects of business restructurings chapter IX of the Transfer Pricing Guidelines), with the scope to find out how the specialized international institution estimates the impact of business restructuring for tax and transfer pricing purposes. Moreover, we applied the comparison investigation technique, by using as comparison criteria: the assets used, the risks assumed, the function performed, the profitability (evidently, the profitability is growing up simultaneously with the functions and risks undertaken). According to the functions performed and risks assumed, the entities are labeled into limited risk units (such as toll manufacturer or commission agent), medium risk (contract manufacturer, commissionaire, stripped distributor) or high risk units (fully fledged manufacturer, fully fledged distributor). Further on in this

paper, the most important characteristics of each of the above types are presented by comparison with the other types.

### **Literature review**

The resource allocation and transfer pricing problem are topics with a long debate in the accounting, management science and economics literature.

According to the study conducted by Ho (2008), the international transfer pricing is a multidisciplinary research area involving aspects of accounting, marketing, behavioral sciences, business policy, international business, economics, finance, legal sciences, taxation. On the other hand, Sikka & Willmott (2010) consider that transfer pricing is at the intersection debates regarding: the MNE accounting, the social responsibility and the states right to tax.

The earliest studies on the transfer pricing issue were realized by Hirshleifer (1956 & 1957), Dean (1955) and Cook (1955) who provided the first reasons and were between the first sustainers of the later developed *decentralization theory*. For example, Dean wrote: "...the modern integrated multiple product firm functions best if it is made into a miniature of the competitive free enterprise system". Chang & Hong (2000), adepts of the decentralization theory as well, defines the business groups as "a gathering of formally independent firms under the single common administrative and financial control". According to Golub & McAfee (2011), the modern corporation is a semi-autonomous aggregation of business units that run transactions both between them and with entities outside the group.

There are a lot of studies suggesting that business groups provide efficient forms of governance in certain circumstances by showing that companies affiliated to groups tend to exhibit higher profitability than independent companies in the same countries (Ghemawat & Khanna, 1998; Khanna & Palepu, 1999; Chan & Choi, 1998). This approach relied on the *resource-based theory*, who emphasizes the role of both intangible and tangible resources as the ultimate source of competitive advantage and performance (Barney, 1986; Wernerfelt, 1984). Certain researchers (Pahalad & Hamel, 1990; Kogut & Zander, 1992; Teece, Pisano & Shuen, 1997) consider that intangible resources like brand or technology shared among group entities are particularly important sources of sustainable competitive advantage. This approach leads to the conclusion that a group possessing more intangible resources would exhibit higher performance.

In our times, in order to increase their performance, companies are faced to reorganize their activity by operating various restructurings which may involve cross-border transfers of valuable intangibles. Business model innovation (restructuring) is seen as material to obtaining profit and "focuses on aspects such as creating new markets, developing go-to-market initiative and innovation thereof, competitive disruption or competitive positioning and developing new value propositions" (Debruyne & Schoovaerts, 2006). According to Johnson, Christensen & Kagermann (2008), the elements of a succesul business model are: customer value proposition, key resources (resource based theory), key processes (diversification theory) and profit formula. They also consider that restructuring generally requires more effort than anticipated.

From a tax perspective, a business model's cost base and revenue potential are the most relevant aspects. In the value chain of getting the products to market, all business models have a certain organization of assets used, risks assumed and functions performed, that trigger the company's overall success (Bakker, 2009).

For tax and transfer pricing purposes, the fact that a multinational group entity is labeled as manufacturer, distributor or services provider has immediate effect of attaching consequences to the taxation of that company (Bakker, 2009).

### Business models for tax and transfer pricing purposes

Generally, a business model reorganization consist of “stripping out intangible assets, functions and risks which were normally integrated in local operations and transferring them to more specialized and centralized regional or global entities within the group” (OECD, 2010).

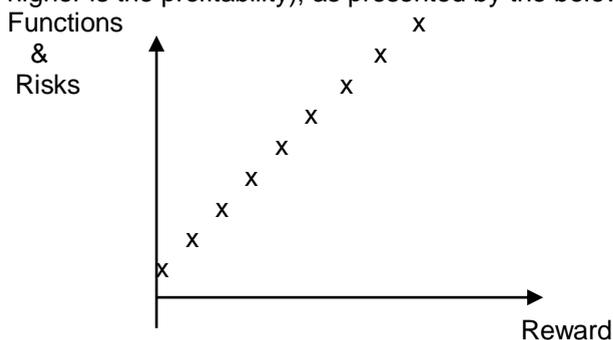
Thus, since the mid-90’s, business restructurings have usually involved the centralization of intangible assets and of risks with the potential profits that might be derived by them. The most used forms of business restructurings were represented by the following processes:

- Conversion of a full – fledged distributor into a limited risks distributor or a commissionaires for a related party operating as a principal;
- Conversion of a full – fledged manufacturer into a contract manufacturer or a toll manufacturer for a related party operating as a principal;
- Transfer of intangible property (IP) rights to a central entity within the group. (OECD, 2010).

Notwithstanding the above, there are also business restructurings which involve the allocation of more intangibles and more risks to operational units (manufacturers and distributors). Moreover, there are business restructurings consisting of the rationalization, specialization or de – specialization of operations, such as: research and development, manufacturing processes, manufacturing sites, distribution activities, marketing services etc.

However, independently of the business restructuring forms and reasons, there are certain typical transfers that might arise when such restructurings are put in place, as follows: transfer of tangible assets, transfer of intangible assets and transfer of activities (ongoing concern). Another feature common to all business restructurings is the fact that such a process always involves the reallocation of profits among the entities within the group, either immediately after the restructuring or over certain years.

Typically, the profitability of an entity depends on the functions performed and risk assumed (meaning that the higher are functions performed and risk assumed, the higher is the profitability), as presented by the below figure:



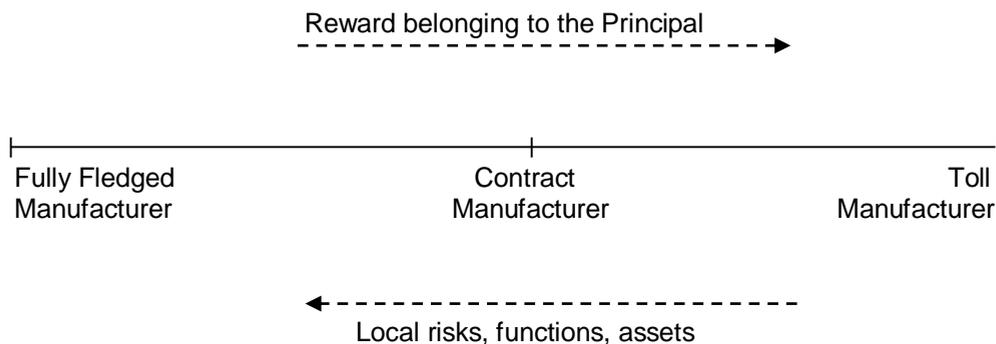
**Figure1.** Relation profitability – risks & functions

Source: realized by authors

In the bellow paragraphs there will be presented the most important characteristics, (from a tax and transfer pricing perspective) of manufacturer and sales business models

A. Manufacturer models

Manufacturing is the process of transformation from raw materials into finished goods. As presented in the chart below, manufacturing is generally performed in one of three risk/function models recognized for transfer pricing purposes: toll manufacturing, contract manufacturing and fully fledged manufacturing.



**Figure 2:** Manufacturer models

Source: realized by authors

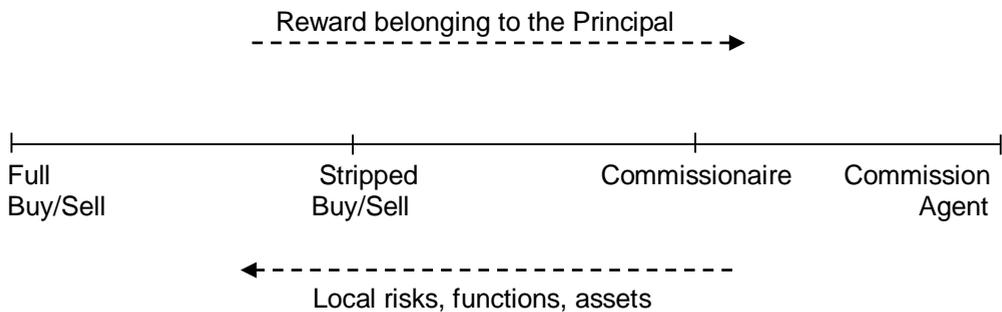
A toll manufacturer is actually a service provider which activity generally consists of processing raw materials following the specification and clearly instruction of the principal. The toll manufacturer does not become the owner of the raw-materials, work-in-progress or goods manufactured; it has no responsibility for production scheduling, procurement of raw material, quality control, distribution, logistic or revenues collections (Adams & Graham, 1999). Thus, such an entity assumes neither inventory risk and usually owns no valuable intangible (just routine manufacturing/processing skills). The transfer prices used for remunerating the operations performed by a toll manufacturer can be determined by using the cost-plus method or the transactional net margin method (assuming that the comparable uncontrolled price method – CUP, cannot be used).

A contract manufacturer generally provide manufacturing functions based on a written agreement, becomes the owner of the raw materials and the finished products and is responsible for processing the raw materials (quality control). The contract manufacturer bears the inventory risk, and generally bears more risks and responsibilities than a toll manufacturer, however, the procurement decisions, production scheduling and logistics remain with the principal. Also, the contract manufacturer does not hold valuable intangibles. As in case of a toll manufacturer, the transfer prices used for remunerate a contract manufacturer might be determined by applying the cost-plus method or the transactional net margin method (assuming that the comparable uncontrolled price method – CUP, cannot be used).

A fully fledged manufacturer typically assumes all the relevant functions related to the production process (sourcing and purchasing raw materials, finding clients, R&D - use of intangibles, production schedule, quality control, logistics) and also the associated risks (inventory risk, market risk, warranty risk etc). If the fully fledged manufacturer and the distributor with which it transacts use valuable intangible, the most appropriate method to be used for determining the transfer prices is the profit split method.

### B. Sales models

The sales or distribution represent the process by which a product/service is passed through the business system to the end-consumer. As in the manufacturer case, there are different types of distributors (depending on functions performed, risks assumed and assets used), as presented in the chart below:



**Figure 3:** Sales models  
Source: realized by authors

A commission agent is an intermediary that arranges the sales of products to customer on behalf and on the name of the principal, while the latter is the goods' owner and generally signs the sales contracts (no inventory risk for the commission agent). The remuneration for activity performed by the commission agent is typically based on the cost-plus method (assuming that the CUP method cannot be used), or a commission (percentage) on the sales.

A commissionaire is similar with the commission agent, with the difference that it sells the goods on behalf of the principal but in its name. The commissionaire does not become the owner of the goods and does not bear any inventory risk. The transfer prices used for remunerate a commissionaire might be determined by applying the resale-price method or the transactional net margin method (assuming that the comparable uncontrolled price method – CUP, cannot be used).

A stripped buy/sell distributor is similar to fully fledged distributor, with the difference that the former is stripped of certain functions and risks. The stripped buy/sell distributor become the owner of the goods sold (immediately prior to the sale to the client) and thus bears certain limited inventory risks. Also, the distributor acts in its account and in its name. As in case of a commissionaire, the transfer prices used for remunerate a stripped buy/sell distributor might be determined by applying the

resale-price method or the transactional net margin method (assuming that the comparable uncontrolled price method – CUP, cannot be used).

A fully fledged distributor is acting more autonomously than a stripped distributor; the activity performed is decentralized, with little or no central control or consistency.

#### Other transfer pricing aspects relevant for business restructurings

In order for a business restructuring to be in compliance with the transfer pricing rules, then, these rules have to be respected both by the restructuring itself and by the post restructuring transactions as well.

The arm's length principle (which is the international standard that OECD member countries have agreed should be used for establishing transfer prices for tax purposes) treats the entities within a group as separate units rather than inseparable parts of a single business. Consequently, for transfer pricing purposes, it is not enough that a restructuring process makes operational and commercial sense for the group as a whole, but the process should be arm's length at the level of each individual entity (taxpayer).

#### **Conclusions**

As a consequence of the globalized economy, the pressure of competition and the need for increasing the efficiency are important drivers for business restructurings. Generally, a business reorganization consist of "stripping out" intangible assets, functions and risks which were normally integrated in local operations and transferring them to more specialized and centralized regional or global entities within the group. The industrial and commercial restructurings have complex and (often) significant consequences for international tax purposes due to the major impact they have on the allocation of the taxable profits of a multinational enterprise among the countries in which it activates.

By using the fundamental research type, the literature review and comparison as investigation techniques, this paper was aiming to present, from a transfer pricing point of view, the general characteristics of business models used in present times. More exactly, the paper presented the general features of manufacturer business models (fully fledged manufacturer, contract manufacturer, toll manufacturer) and sales business models (fully fledged distributor, stripped distributor, commissionaire, commission agent).

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## HARMONIZATION OF NATIONAL REGULATION AND INTERNATIONAL FINANCIAL REPORTING STANDARDS – PARTICULAR CASE OF NONCURRENT ASSETS

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**Abstract:** *In the scientific literature, accounting harmonization is a top topic because it helps to increase the comparability of financial statements. Also in Romania in the last 10 years became a topic that is very often debated. The harmonization is trying to reduce differences of financial reporting statements between countries or, in the other words, it is trying to bring to a common denominator of existing rules when appear conflicts of comparability between them. The purpose of this paper is to measure the harmonisation between national and international regulation for a significant element of financial position statement, such as noncurrent assets. This paper provides an empirical research of information that must be presented by entities which apply national accounting standards or international ones when financial statements are prepared, trying to measure the harmonization between the two referential. Thus, in trying to determine the harmonisation, we use the Jaccard coefficient in order to provide an overview of the degree of harmonization of accounting practice. When measuring the degree of comparability of Romanian accounting regulations with International Accounting Standards we analyzed noncurrent assets and impairment of assets using the Jaccard coefficient for accounting treatments and we calculated an average of similarities between the two regulations. Further, the results suggest that there is an average level of harmonization for the accounting treatment of noncurrent assets and for determining the impairment of the assets, the methods are the same. The study contributes to the development of accounting literature about the harmonisation between national regulation and international standards regarding the noncurrent assets and impairment of the assets, which together with the other elements define the activity of the business. In addition, the study provides an analysis of how the regulations treats noncurrent assets, during the life of the asset, namely: the recognition phase, the evaluation and the depreciation.*

**Keywords:** *Noncurrent assets, national and international regulations, accounting harmonisation measurement.*

**JEL classification:** *M 41*

## **1. Introduction**

International Financial Reporting Standards including International Accounting Standards (IAS) cover all aspects and regulations issued by the IASB regarding accounting standards. Companies in the European Union publicly traded are required to prepare financial statements in accordance with IFRS since 2005. IAS / IFRS are a set of principles and guidelines to approach accounting, with the stated purpose of providing information about the financial position and performance of the enterprise. This information will be useful to a broad group of users in making economic decisions.

OMPF 3055/2009 is a guide to the application of accounting regulations with European Directives. All entities in Romania must use these standards for conducting and preparing financial statements. As IAS / IFRS, these regulations provide information about the position and financial performance, and cash flows for the year ended, information that is useful to financial statements users.

In this respect, in Romania has made remarkable steps which led to considerable legislative progress by switching to the application of international accounting standards and accounting harmonization with the rules contained in the regulations in Europe. Thus, in our country since 1 January 2007, according to OMFP 1121/2006, companies that are listed on a regulated market are required to apply for financial statements IAS/IFRS referential. Entities which operate on a regulated market may choose to apply this referential, but there is no obligation to do so.

After introduction, the second section aims to present an overview of noncurrent assets and impairment of assets using the relevant literature. The third section provides the methodology research that we used for this paper. Also, this section includes the main elements chosen to be analyzed in the regulations. The next section is a case study, where we explained the similarities and differences between national regulation and international standards. The last section presents the conclusions regarding the accounting harmonization of both standards and some suggestions for further researches.

## **2. Literature review**

Information is considered a key element that helps to economic prediction for the entity, prediction that could not be made without relevant information. In making decisions, disclosure of information is essential and their absence leads to negative effects (Edmiston, 2011). The literature shows that reporting can be accomplished by establishing a common point between international standards and policies adopted by entities in practice (Kueppers and Sullivan, 2010).

In terms of tangible assets, Manea and Stefan (2009) analyses the criteria that must be met when recognize an asset as a tangible one and addresses the importance of recognizing for the first time a tangible asset. The conclusion of the research highlights the need of experience and professionalism of the company's management in order to avoid recognition of an asset in an improperly.

The domain of intangible assets is studied by Tiron Tudor and Dragu (2010), in researching the impact of international accounting standards on accounting practices harmonization with European Union. In the article, is a case study on the reporting of intangible assets, exposing differences arising, if any, on the financial statements of different companies that apply the same methods of recognition. The

research objective is to demonstrate trends of harmonization of EU member countries following the adoption of financial reporting standards.

Pozzoli et al (2011), based on an empirical study that analyzes the accounting treatment of intangible assets in the financial statements, assessing 90 listed companies in Italy between 2007-2009 which have reported financial statements in accordance with IAS / IFRS. The research focuses on the one hand, the presentation of intangible assets in the financial statements and on the other hand, the entity's ability to invest in the future in order to make a profit and be competitive in the market. The method used by the three authors is the application of ratios, such as: intangible assets and total assets held by the entity, impairment of intangible assets related to intangible assets.

Barth and Clinch (1998) demonstrated through the conducted researches that may result from the revaluation of assets both, increases and decreases, resulting relevant values. However, due to the nature of the asset, growth could affect the value of the relevant asset.

According to Pozzoli et al (2011) Impairment of assets (IAS36) is applied at least once per year and the entities apply impairment before preparing financial statements.

To determine the degree of harmonization of national accounting with IAS / IFRS, Ding et al (2007) have measured differences using two indicators:

- absence – highlighted item is covered only by the IAS / IFRS;
- divergence – identify an element which is defined in national regulations and IAS / IFRS, but have different accounting treatment.

Qu and Guohua (2010) identified relevant studies conducted on the harmonization of measurement methods using the Euclidean Distance, Jaccard coefficient and Spearman. In this respect a relevant example is the case study conducted by Fontes et al (2005), which measures the degree of harmonization of national standards from Portugal with IAS / IFRS, using financial statements entered between 1977 and 2003, first of all using Euclidean distance, followed later by the Jaccard coefficient and the Spearman method.

Also, Jaccard coefficient had been applied in Romanian literature by Mustata (2008), measuring the level of harmonization between national and international regulations, using computational tools such as Euclidean distance and Jaccard coefficient. The study revealed a degree of conformity between national regulations with the international standards and in the period 1973-2007 has been a significant increase. Thus, Jaccard coefficient was used for the case of intangible assets which are regulated in international accounting standard and national regulations (Dragu, 2010). Strouhal & co (2011) exemplifies the use Jaccard coefficient by measuring the degree of harmonization between national regulations of the countries: Romania, Estonia, Latvia, Czech Republic with International Accounting Standards.

### **3. Methodology research**

In this paper, determining the similarities and differences for the information on tangible assets, intangible assets and impairment of assets that must be disclosed, both for those who use national regulations and for those who use International Financial Reporting Standards for preparing financial statements, is done through the application Jaccard coefficient. The choice of this coefficient is due to the use in

the accounting literature a series of articles describing this factor, exemplified by measuring the degree of harmonization between national and international regulations, using the Jaccard coefficient. In our research, we try to measure the harmonization between OMFP 3055/2009 with IAS 16 "Property, plant and equipment", IAS 36 "Impairment of Assets" and IAS 38 "Intangible Assets". In this respect, by transposing the coefficients in the field of accounting, to determine the compatibility of the Romanian accounting regulation and IAS, the formula for calculating Jaccard coefficient is:

$$S_{ij} = a / (a + b + c)$$

and

$$D_{ij} = (b + c) / (a + b + c),$$

- $S_{ij}$  – the degree of similarity between the two sets of accounting regulations analyzed;
- $D_{ij}$  – the degree of differences between the two sets of accounting regulations analysed;
- $a$  – the number of elements which take the value "1" in both sets of regulations;
- $b$  - the number of elements which take the value "0" in both sets of regulations;
- $c$  - the number of elements which take the value "1" in set of rules "i" and the "0" set "j".

Each element analyzed and found in sets of accounting, whether national or international, is symbolized by the figure "1". For items that are not treated in any accounting regulations we allocated the number "0". For each set of accounting regulations, we selected items that they treat. Thus, we classified standards based on three criteria, namely: recognition, measurement and impairment. Then we divided each criterion according to which elements are characterized, then assigning the number "1" when both standards are dealing with the subject or a "0" if do not treat the selected item, it is insufficient mentioned or is not explained.

The criteria were chosen from international accounting standards and national regulations. Furthermore, we analyzed the assets using the recognition, measurement and depreciation for each criterion to establish the common points and the different treatment of the two regulations. Therefore, we determined for each particular criterion chosen the similarities ( $S_{ij}$ ) and the differences ( $D_{ij}$ ) between those two regulations. Thus, we determined the final values of selected regulations, in other words, the degree of similarities between national regulations (OMFP 3055/2009) and International Accounting Standards (IAS 16, IAS 36 and IAS38).

The checklist of the investigated elements were chosen because these represents the important steps when dealing with an asset. The study provides an analysis of how the regulations treats noncurrent assets, during the life of the asset, namely: the recognition phase, the evaluation and the depreciation.

The elements taken into consideration for each standard are:

- Intangible assets – *recognition*: formation expenses, development costs, patents, licenses, trademarks, brands, goodwill, customers lists; *evaluation – initial measurement*: acquisition cost, production cost; – *subsequent measurement*: book value, revalued value and residual value; *impairment – determination method*:

impairment tests, depreciation – *depreciation methods*: straight – line method; digressive method, accelerate method and units of production method.

■ Impairment of assets – *indicators of impairment – external sources*: market value, negative changes – *internal sources*: different changes, negative results; – *recognition*: book value is bigger than the recoverable value, recognize in the profit or losses of the period; – *evaluation*: recoverable value.

Thus, for tangible assets are followed seventeen elements, which are described or not in national regulation or in international standard. Also, for the intangible assets are verified sixteen items and for the impairment of assets are eight elements. Those elements were chosen from both regulations and checked if the element is explained or treated in standards.

#### **4. Comparative study on the accounting treatment of tangible and intangible assets in the national and international regulations**

##### **4.1. IAS 16 “Property, plant and equipment”**

Accounting treatment of the tangible assets such as property, plants and equipments which these receives in terms of national regulations (OMPF 3055/2009) and from the point of view of international accounting standards (IAS 16) are the following:

- International standards recognize the following as tangible assets: land, land improvements, buildings, installations, means of transport, technological equipment, offices equipment. An item that appears only in national legislation covers advances and tangible assets in progress which are shown separately in the category of tangible assets. Thus, under this criterion have a similarity of 75% and a degree difference of 25%.
- Initial evaluation is recognized in both sets of standards is carried at acquisition cost, production cost and fair value, in this case having a degree of similarity of 100%. Subsequent measurement is done using accounting value and the revalued value and is treated by both sets of accounting. International Accounting Standards recognizes the concept of residual value as the estimated amount after deducting the estimated costs of disposal, if the asset were already of the age and condition expected at the end of its life. For this criterion, the similarity is 67% and the difference is 33%. Thus, in terms of tangible asset valuation, the similarities between the two regulations are 85% and the difference is 15%, the only criterion differently treated by IAS 16 is the residual value.
- To determine impairment are applied tests but are recognized only by International Accounting Standards. Depreciation method is used for both sets of regulations. National regulations mentions four methods of determining depreciation and international standards find only 3 methods. Average recorded for impairment of assets is 67% similarity and 33% differentiation.

After calculating the Jaccard coefficient on the conformity of national legislation with international regarding tangible assets, we obtained a figure of 76.47% for similarities and the diversity is recorded at a rate of 23.53%.

## **4.2. IAS 38 "Intangible assets"**

From the point of view of the recognition of intangible assets note that there are differences between international standards and national regulation on expenses and customer lists. OMPF 3055/2009 clearly specifies that customer lists are not considered intangible assets. In terms of formation expenses, IAS 38 considers that it not fulfilled the criterion to be considered intangible assets, which are recognized directly as an expense in the income statement.

Initial measurement can be done at acquisition cost or production cost, terminology accepted and explained by both sets of standards. Regarding further evaluation there are some differences on the residual value. IAS 38 defines residual value, "the value of an intangible asset associated with finite useful life is zero, with the following exceptions: if there is a commitment by a third party to purchase the asset at the end of its life or when there is an active market for that intangible assets: residual value can be determined by reference to the same market and it is likely that such a market will exist at the end of the asset "(IAS 38), while the 3055 OMPF defines residual value as the fair value of good ("whether the financial statements are prepared in accordance with national regulations for the first time, the acquisition cost or production cost of an asset cannot be determined without undue expense or delay, the residual value at the beginning of the financial year may be treated as cost of acquisition or production, provisions disclosed in the notes "(OMFP 3055/2009 art. 67, paragraph 2)).

Depreciation, the component of the way in which is determined the impairment of intangible assets and is recognized and accepted by both regulations, but only international standards takes into consideration the impairment testing as another method of calculating impairment.

In terms of intangibles, national regulations against international standards, average exposed the issue, we note that the similarity of operations is in the proportion of 68.75%, and the differences between the two regulations are 31.25%.

## **4.3. IAS 36 "Impairment of Assets"**

The recognition impairment of the statements shown in the above, at the rate of 100%, according to international standards.

Indications of impairment are taken in both reglementations from internal sources: physical wear or moral changes: unproductive asset, restructuring plans, planning before the estimated date prior to disposal, the economy weaker than expected and the external: market value, changes with an adverse effect on the entity. Thus, for each source have assigned the value "1", that is, the similarity between the two measures is 100%.

Therefore, entities that prepare financial statements using accounting information from the national standards for impairment are the same as those who is using international standards for reporting financial statements.

## **5. Conclusions and Scope for Future Research**

In conclusion, accounting harmonization aims to improve comparability of financial information. International harmonization of accounting rules and practices seek to define the scope and content which can be determined, starting with normalization of accounting. The financial statements of a company have to provide information

on the position and financial performance, and cash flows. Usefulness of these documents is reflected in the economic decisions taken by users of information which they are intended. Also, financial statements offer managers a view of the entity, information which is used for set tangible objective. Furthermore, financial statement has to be transparent and correctly done, to provide an overview for the activity of the entity, these elements underpinning the development of strategies and objectives.

Regarding harmonization of national regulations with international accounting standards, we can say that the similarity of accounting treatment of noncurrent assets and the impairment of assets into the two standards is achieved in a proportion of 80%.

Future researches can focus on analyzing the information required to be disclosed regarding the noncurrent assets and the impairment of assets of the entities that are publicly traded and preparers of financial statements in accordance with International Accounting Standards.

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# CAN ASSET REVALUATION BE MANIPULATIVE? - A CASE STUDY

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**Abstract:** *Asset revaluation can trigger different signals to investors depending upon company type, asset intensity and category and investors' expectations. In the same time, motivations behind asset revaluation decisions are diverse, being influenced by management incentives, credit covenants, faithful representation and various other reasons. In many cases the revaluation decision is imposed upon the company by auditors or the need to reduce information asymmetry. In Romania, one of the main decision drivers is the Fiscal Code, due to buildings taxation provisions. For companies that revalue their fixed assets for taxation purposes only (which is the case for most small companies in Romania), the primary concern is to reduce the fiscal impact – the preferred scenario in this case is most likely to be the one that reduces tax expenses. Our research aims to provide a full picture of the motivations behind the revaluation decision and point to the manipulation instruments made available to companies by the allowed alternatives in what regards (1) which assets to be revalued and (2) how to recalculate book values. By means of a case study we identify the options available to a revaluating company and show how each one can impact the financial statements and financial ratios, thus influencing financial statement users' perception. Our analysis is limited to fixed assets revaluation, as these are the ones revaluated by most Romanian companies. The comparative analysis shows that the decision to not revalue certain assets categories can lead to serious distortions of the faithful image. Financial ratios can be significantly impacted by the type of assets revalued, depending upon the revaluation direction (upward or downward) and the revaluation differences. In upward revaluation leverage ratios and solvency can improve, leading to a better position in relation to credit covenants. Equity is also positively affected. Alternatively, a decrease of assets' value will be reflected in a negative manner upon these indicators, which might be a serious reason for a company to not revalue, thus not preserving the true and fair value of assets in the financial statements. Companies can choose between two alternatives of recalculating book values and depreciation. The option taken can also influence the company's financial position. Our study shows that impact over profitability is lower and that profit tax is not affected in a significant manner even if an influence can be identified.*

**Keywords:** *assets' revaluation, fair value, financial statements, motivations*

**JEL Classification:** *M49*

## **1. Introduction**

The motives behind companies' asset revaluation decision are diverse but are usually motivated by two main reasons: constraint or various other incentives. Constraint is usually due to specific financial reporting standards and / or national norms. In USA, the national accounting standards (US GAAP) do not allow upward revaluations while companies reporting under the International Financial Reporting

Standards (IFRS) can choose between the historical cost model and the fair value model. In Romania, Fiscal Code provisions include a buildings' taxation scheme that is directly correlated to their gross book value and revaluation frequency. Higher time spans between revaluations can lead to higher taxations quotas. Large and /or listed companies are audited and auditors will seek insurance that assets are reflected at fair value in the financial statements, imposing the companies to revalue their assets. Besides constraint one of the various motives can be investor's reaction to revaluation but there are other reasons too. Depending upon motivations behind the revaluation decision companies might revalue only some of their assets. The approach to valuation in itself and then to the accounting treatment will influence equity and the asset-related financial indicators of the revaluating company. The purpose of our research is to highlight the diverse motivations behind the assets' revaluation decision and to illustrate by means of a case study the manner in which the decision of which assets are to be revaluated, the valuation approach and the accounting treatment can influence relevant financial indicators. We believe that this analysis and its findings are useful to all parties involved (company, valuers and financial statement users), giving them insight to the particularities of the process, the sensitive spots and the degree to which financial statements can be manipulated. The article unfolds as follows: first, we present the research methodology used. Second, we make a literature review that summarises the literature's findings regarding motives and incentives behind revaluation decision and investor's reactions to revaluation. Third, by means of a case study, we present the impact over the company's financial statements following assets revaluation, considering several alternatives and highlighting the sensitive areas. Conclusions are presented in the end and we point to further research possibilities.

## **2. Research Methodology**

Our research is based on both literature review and case study. Literature review has involved a qualitative and quantitative analysis that led to a clustering of the revaluation motivations researched. We have relied during our literature review process on content analysis and comparative analysis. Our content analysis is orientated to the meaning of the studied documents. Comparative analysis was used in order to emphasis resemblances and differences between the articles studied and synthesize conclusions. We have also relied on interpretative analysis in order to compare conclusions with the status of Romanian companies' incentives behind revaluation decision. For the case study we have used mostly comparative, critical and interpretative analysis. The calculations made represent the quantitative aspect of our analysis. Comparative analysis is made for the interpretation of the effect of different alternatives chosen. In the end, critique and interpretative analysis is used to highlight the impact of decisions made during the process.

## **3. Literature Review**

The companies' financial statements information has a great deal of influence over the investor's actions (Gaeremynck and Veugelers, 1999). Financial statements users are primarily concerned with their relevance and credibility. While credibility is considered by some authors as a lesson fast learned, relevance, especially where fair value is involved, can be difficult (Kadous et. al, 2012). Studies made over a period of four decades show asset revaluation can have an influence over the companies' value and that fair value is a significant indicator for investors. Sharpe

and Walker (1975) found that stock prices increase for companies with upward revaluations while Standish and Ung (1982) considered that following revaluations companies' value only increases when stock owners have positive expectations. Revaluation and stock price are found to be directly related by Jaggi and Tsui (2001) while Bart and Clinch (1998) consider that revaluation of financial and tangible assets is correlated to market quotations while fixed assets revaluation is considered relevant only depending upon company type and when is made every three years or less. Kadous et. al (2012) find that the relevance of financial situation is influenced by the perception of users regarding the fair value estimation. So, in general, studies show that revaluation is generally considered to be relevant by investors but they perceive this revaluation in various ways, depending upon company, assets' intensity, approach of fair value measurement, geographical area etc. and is usually correlated with investors' expectations.

Reviewing academic researches made upon the subject of asset revaluation motivations we have found that there is a leading positivist stream of research based on empirical studies. We have analysed a number of eighteen studies made during the last 20 years on various geographical areas, mostly Great Britain and its influence areas, where revaluation was allowed before IFRS. The main motivations and incentives identified by these studies are:

- Better access to financing
- True and fair image of the company
- Signals for investors
- The intensity of assets
- The need to reduce information asymmetry
- Low liquidity
- Management opportunism
- Political costs (for large companies)

Many studies consider that better access to financing is a serious incentive behind asset revaluation decision and that asset revaluation can be a solution for companies at risk of violating financial covenants or with cash flow difficulties (Whittered and Chan, 1992; Brown, Izan and Loh, 1992; Easton et. al, 1993; Cotter and Zimmer, 1995; Black et. al, 1998; Gaeremynck and Veugelers, 1999; Jaggi and Tsui, 2001). During the last years though, there is research that takes the opposite view, finding that better credit leverage is no longer a motive for revaluation (Senga and Sub, 2010) and that this motivation's strength varies from a country to another (Barlev, 2007). A fair company value is considered to be better supported if companies include revaluation reserves in their book values (Easton et. al, 1993) and some companies revalue assets in order to signal the fair value of assets to investors (Jaggi and Tsui, 2001). Easton et. al (1993) consider that the level of revaluation reserves is a significant explanatory variable for the stock price of companies with important changes of debt-to-equity indicator but not for other companies. Revaluation of fixed assets is considered to be more reliable (Lynn and Peasnell, 2000) and is positively associated with the magnitude and intensity of assets and negatively with liquidity. Management opportunism is considered to be a motive for the decision of assets revaluation decision as this is considered a way to manipulate earnings (Black et. al, 1998; Quagli and Avalone, 2010). The need to reduce information asymmetry between management and shareholders' and other information users is also identified as a motivation (Quagli and Avalone, 2010).

These studies also point to several motives that lead companies to the decision to not revalue: high revaluation costs, conservative positions of internationally listed companies (Pierra, 2007), credibility issues (Gaeremynck and Veugelers, 1999, Lin and Peasnel, 2003, Cotter, 1999), a high quantity of assets, especially equipment and machinery (Easton et al, 1993), enough internal financing resources (Whittered and Chan 1992). Results are not always consistent from a study to another and there are limitations due to sampling and methods used and also due to the fact that the economic and legal environment of each country is also a relevant variable (Barlev et. al, 2007). We subscribe to Barlev's opinion that revaluation motivations are largely depending upon the specific legal and economic environment of each country. Without basing this conclusion on a study, but analysing Romania's regulation and practices, we believe that for Romanian companies the main revaluation motives are (1) Fiscal Code stipulations, (2) the need of correlation between the net book values and mortgage values estimated for company's assets that secure loans, (3) the need to reflect the fair value of assets in the financial statements (especially for listed companies or under the auditor's pressure) and (4) the need for equity improvement. Other motivations, as earnings management or reduction of information asymmetry might be also relevant but do not prevail.

#### **4. Case study**

We have used a case study to illustrate the possible impact over financial statements of various alternatives available when a company decides to revalue. Our aim is to identify the manner in which each option available to the company in this process can impact the financial statements and financial ratios, thus influencing financial statement users' perception. The case study will allow us a quantitative assessment of this impact, even if limited to the actual situation of the subject. Our analysis is limited to fixed assets revaluation, as these are the ones revaluated by most Romanian companies.

We have considered a company (hereinafter the "Company") with a relevant fixed assets intensity and also complex activity (production and trade). The Company owns land, buildings and equipment. Last revaluation made three years ago had as main purpose buildings' taxation and the Company only registered the values for the accounting group of Buildings (212). Our Company is currently in position to revalue its assets at the end of the financial year. This case study analyses the whole process, presenting first the current situation and revaluation decisions taken by the company as well as revaluation effects. We have then taken into consideration all alternative scenarios available for the company in order to do a comparative analysis of the financial impact (accounting and fiscal). The decision areas identified were: (1) to revalue or not the assets; (2) in case of a positive revaluation decision, which category of assets is to be revaluated; (3) for assets that get depreciated, which of the accounting treatment alternative allowed (for gross book value and depreciation calculation) should be considered.

Due to taxation issues the Company considers to revalue buildings at year end. The fixed assets structure before the yearend possible revaluation is presented in Table 1:

**Table 1 – Structure and weight of fixed assets**

<b>Structure and weight of fixed assets</b>	
Weight of tangible fixed assets in total fixed assets	99.65%
Weight of tangible fixed assets in total assets	40.80%
Tangible fixed assets distribution:	
- Land	0.59%
- Buildings	74.40%
- Equipment	25.01%

Source: Author's projection based on Company data

Tangible fixed assets represent over 40% of total assets, therefore an important weight. The land was never revalued which is an indication that the financial statements might not reflect a fair value for land. Land and constructions owned by the company compose a real estate property, made of three buildings and land with a 1,625 square meters area. The new valuation is made based on the income approach as the property is the type that generates revenues and this approach was considered relevant. In the end, the appraiser had to allocate the value between land and buildings, as the income approach lead to the value of the overall property. For value allocation the appraiser has deduced the market value estimated for land from the total value estimated for the property and the result was allocated to buildings. The resulted values are presented in Table 2. An analysis of the valuation report shows that the appraiser has chosen the upper value level for land, which has led to a smaller value allocated for buildings (motivated by taxation reasons).

**Table 2 – Valuation results and value allocation**

<b>Value allocation following revaluation</b>	
<b>Description</b>	<b>Fair Value (Lei)</b>
Total property of which	2,768,211
- Buildings	1,375,651
- Land	1,392,560

Source: Company valuation report

Revaluation differences are presented in Table 3.

**Table 3 – Revaluation differences**

<b>Revaluation results</b>					
	Yearend gross book value	Yearend depreciation	Yearend net book value	Estimated fair value	Revaluation differences
	Lei	Lei	Lei	Lei	Lei
Land	6,022	-	6,022	1,392,560	1,386,538
Buildings	807,724	65,680	742,044	1,375,651	633,607
<b>TOTAL</b>	<b>813,746</b>	<b>65,680</b>	<b>748,066</b>	<b>2,768,211</b>	<b>2,020,145</b>

Source: the Author

The Company decided to register only the revalued value of buildings and not the land. With regard to recalculation of gross book values and depreciation, OMFP 3055/2009 (in accordance with IAS 16 provisions) allows two alternative treatments:

- depreciation is calculated proportionally with the change within the asset value, the revalued value being the new net book value – coded by us as Treatment A
- depreciation is eliminated from the gross book value of the asset and the net book value is restated at the revalued value of the asset – coded by us as Treatment B

The Company decided for treatment B. The estimated fair value is the new book value (which equals the net book value) and depreciation becomes null.

**Table 4 – Book values recalculation**

<b>Recalculation of book values and depreciation - Treatment B</b>				
Recalculated gross book value	Yearend depreciation	Recalculated net book value	Yearly depreciation	Previous year depreciation
<b>Lei</b>	Lei	Lei	Lei	Lei
<b>1,375,651</b>	<b>0</b>	<b>1,375,651</b>	<b>30,570</b>	<b>17,822</b>

Source: the Author

*Alternative scenarios to be considered:*

At year end, the Company could choose between the following alternatives, which we have coded below:

- NO-REV - to make no revaluation
- B-REV - to evaluate only the buildings and recalculate book values and depreciation in accordance to one of the previously presented possibilities:
  - o B-REV\_A - accounting treatment A
  - o B-REV\_B - accounting treatment B (the chosen option)
- L&B-REV - to reevaluate both land and buildings and recalculate book values and depreciation for buildings in accordance to one of the previously presented possibilities:
  - o L&B-REV\_A - accounting treatment A
  - o L&B-REV\_B - accounting treatment B
- To reevaluate all fixed assets (including machinery and equipment) and choose one of the two accounting treatment alternatives (A or B).

Our case study considers the first five alternatives and the impact of each. The land fair value and revaluation differences were presented in Table 3. In Table 5 we present the recalculation of book values for alternative treatment A.

**Table 5 – Alternative recalculation of book values**

Recalculation of book values and depreciation – Scenario B-REV_A				
Recalculated gross book value	Yearend depreciation	Recalculated net book value	Yearly depreciation	Previous year depreciation
Lei	Lei	Lei	Lei	Lei
<b>1,497,413</b>	<b>121,762</b>	<b>1,375,651</b>	<b>33,276</b>	<b>17,822</b>

Source: the Author

The effects of the various alternatives are presented below.

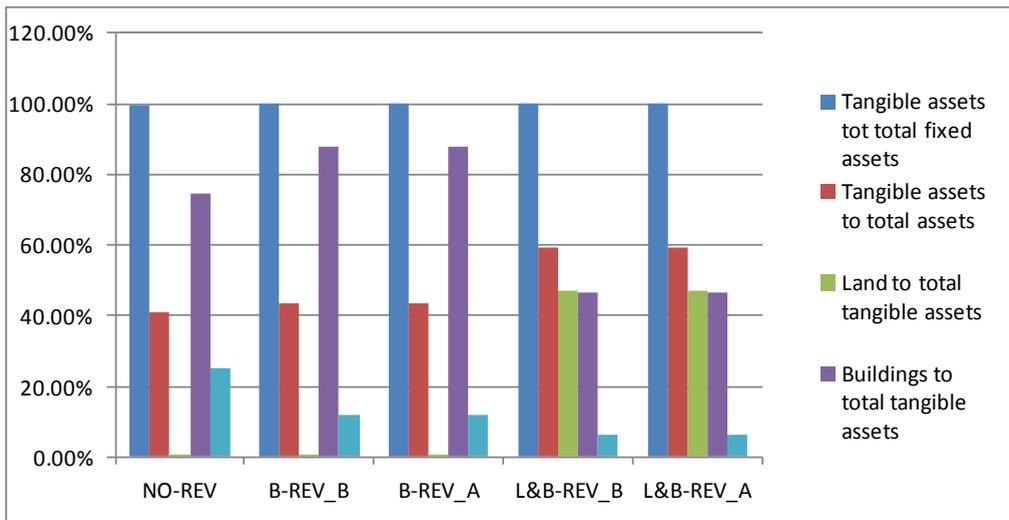
1. *Local taxes*: according to the Fiscal Code in force at the respective date, buildings' tax (applied to gross book value) is of 0.9% if a revaluation took place at least three years before or 5% if no revaluations were made. Table 6 illustrates the fiscal impact, showing an important increase with tax expenses for the no revaluation alternative. The smaller expense occurs for the alternative chosen by the Company (as this returns the smaller gross book value). The Company also registers an expense with valuation services which has to be considered. Land revaluation alternatives are not presented as land taxation is not related to land book values.

**Table 6 – Fiscal impact**

Buildings' tax expense modification				
Description	Previous year tax	Scenario		
		NO-REV	B-REV_A	B-REV_B
Tax quota	0.90%	5%	0.90%	0.90%
Tax on buildings (Lei)	7,270	40,386	13,477	12,381
<b>Yearly variation</b>		<b>556%</b>	<b>185%</b>	<b>170%</b>
Revaluation cost			3,000	3,000
Total expenses (Lei)	7,270	40,386	16,477	15,381
<b>Yearly variation</b>		<b>556%</b>	<b>227%</b>	<b>212%</b>

Source: the Author

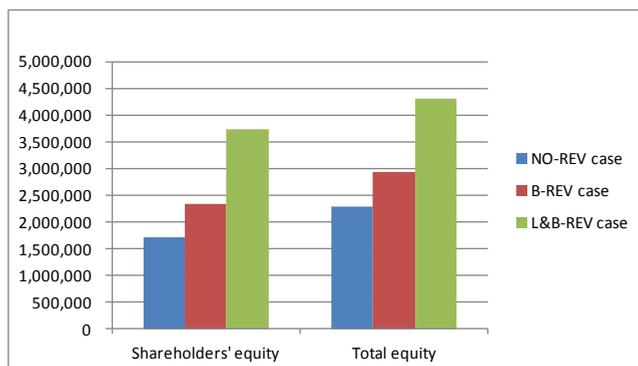
2. *Assets structure*: the fixed assets' structure will vary greatly (see Figure 1) depending upon the chosen scenario. While the weight of tangible fixed assets in total fixed assets does not exchange dramatically, their weight in total assets increases from 40% (the No-Rev case) to 59% (if the Company decides to register the land at fair value too). The fixed assets structure is significantly modified if the Company chooses to register the revaluated value of land, the land weight increasing from 1% to 47% in total tangible assets. It can be easily observed that before revaluation the financial statements do not reflect the true and fair value of assets and that the Company's option of not registering the newly estimated fair value for land leads to an unfaithful representation of the Company's worth.



**Figure 1** – Structure and weight of fixed assets

Source: the Author

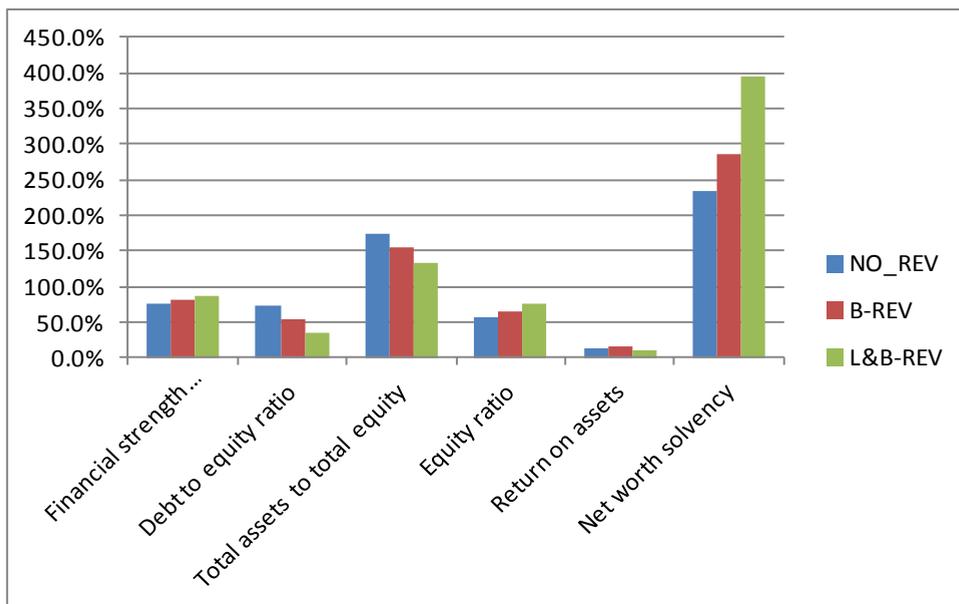
3. *Equity*: The increase of revaluation reserves leads to an increase in shareholders' equity and total equity. In this case, also, the highest increase (by 88%) takes place if the Company decides to register the estimated fair value for land too. Figure 2 presents the variation for three alternatives, as revaluation differences are the same regardless of the accounting treatment alternative chosen.



**Figure 2** – Equity variation

Source: the Author

4. *Financial ratios*: we have also analysed the impact upon the Company's several financial ratios for the 5 alternative scenarios presented. Modifications are obvious for financial leverage and solvability but overall, all financial indicators improve, especially if the new land value is also registered. From the analysed ratios, those that increase are financial strength ratios (illustrated here by shareholders' equity to total equity), equity ratio and net worth solvency. Leverage ratios as debt to equity and total assets to equity decrease, which enables the Company to have a better position in relation to credit covenants. Return on assets remains at a low level.



**Figure 3** – Financial ratios variations

Source: the Author

5. *Fiscal effects*: for fiscal effects we have pursued first the effect upon buildings' tax (presented in table 6). Company profit will be also affected by depreciation expense but only at accounting level, as supplementary depreciation is not a deductible expense. We have assumed that for the following year the Company will maintain the same level of revenues and expenses and analysed the effect over the accounting profit and profit tax generated by the depreciation and buildings' tax expenses for the five scenarios presented

**Table 7** – Comparative profit and loss situation

<b>Profit and loss</b>				
	Year end		Following year	
<i>'Lei</i>	<b>B-REV_A</b>	<b>B-REV_B</b>	<b>B-REV_A</b>	<b>B-REV_B</b>
Turnover	4,450,607	4,450,607	4,450,607	4,450,607
Operational revenues	4,477,668	4,477,668	4,477,668	4,477,668
Total operational expenses of which	3,783,293	3,783,293	3,801,766	3,805,761
- taxes	23,016	23,016	28,127	29,223
- depreciation	97,308	97,308	110,670	113,569
Operational margin	694,375	694,375	675,902	671,907
% operational margin	16%	16%	15%	15%
Financial margin	(48,781)	(48,781)	(48,781)	(48,781)

<b>Gross profit</b>	<b>645,594</b>	<b>645,594</b>	<b>627,121</b>	<b>623,126</b>
<b>Profit tax</b>	<b>105,601</b>	<b>105,601</b>	<b>105,034</b>	<b>104,859</b>
<b>Net result</b>	<b>539,993</b>	<b>539,993</b>	<b>522,086</b>	<b>518,267</b>

Source: The Author

Effects over gross profit are due to an increase of expenses with buildings' tax and depreciation. On the whole we have a small variation of the operational margin and effects upon profit tax are even smaller, as shown in Table 8 below:

Table 8 – Profit and profit tax variation

<b>Profit and profit tax variation</b>				
	<b>Year end</b>		<b>Following year</b>	
Lei	<b>B-REV_B</b>	<b>B-REV_A</b>	<b>B-REV_B</b>	<b>B-REV_A</b>
Operational result	694,375	694,375	675,902	671,907
<i>Yearly variation</i>			<i>-2.66%</i>	<i>-3.24%</i>
Gross profit	645,594	645,594	627,121	623,126
<i>Yearly variation</i>			<i>-2.86%</i>	<i>-3.48%</i>
Profit tax	105,601	105,601	105,034	104,859
<i>Yearly variation</i>			<i>-0.54%</i>	<i>-0.70%</i>

Source: The Author

## 5. Conclusions

The literature review on the matter of motivations behind asset revaluation decisions and markets reaction to revaluation enables us to believe that there are cases where asset revaluation can bring significant changes in the company's financial statements and influence financial statement users' perception. Motivations behind revaluation decisions are diverse, stretching from the need to reflect the true and fair value of assets and reduce information asymmetry to the companies' need to improve equity and financial ratios demanded by credit covenants. For Romanian companies an important driver behind the revaluation decision is the buildings' taxation system.

The case study presented allows us to better understand the manner in which management's decisions can influence the financial statements structure after revaluation, offering insight to the particularities of the process, the sensitive spots and the degree to which financial statements can be manipulated. The company's management has at hand several options (to revalue or not, to revalue only some assets' categories and to recalculate book values) and each has an influence upon balance sheet elements and several financial ratios. Thus, depending upon incentives, management can be in a position to manipulate assets' revaluation to a certain degree which would serve their purpose better.

For Romanian companies that revalue their fixed assets for taxation purposes only (the case for most small companies in Romania), the primary concern is to reduce the fiscal impact – the preferred scenario in this case is most likely to be the one that reduces tax expenses. As land is not taxed at the registered value, companies are

not obliged to revalue the land unless they have other motivations (faithful representation, financial ratios improvement). The decision of not revaluing the land may lead to a distorted image of the assets' worth respectively of the financial statements. The comparative analysis shows that revaluation can have a strong impact over balance sheet elements as equity and asset related ratios, as leverage and solvency while profit and profit tax do not vary in a significant way. Depending upon the revaluation direction (upwards or downwards) and management's decisions regarding subsequent accounting treatment these ratios can improve the company's position in relation to credit covenants or the opposite. Therefore financial statements users have to be cautious in interpreting information following revaluation processes and ask for more details.

The analysis made is limited to the actual situation of the subject company considered and also to the ratios and balance sheet elements analysed. Many other research areas are possible, like a study made on Romanian revaluing companies in order to understand revaluation motivation drivers or preferred decisions following revaluations.

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## LEGAL TREATMENT IN THE MANAGEMENT OF FOREST RESOURCES

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**Abstract:** Forestry plays a significant role in both our country's and global economy. Any entity, in the present case, forest entity, must operate under specific legislation and its own status. In this respect, the conduct of activities within the entities should be based on appropriate national and/or international legislation that represents the base line in linking the entities' interests with the objective requirements of economy. Thus, in establishing a legal framework to correspond to activity development of each type of society, a variety of regulations have been drafted along with repealing or modifying others. Currently, economic legislation comprises a wide range of regulations which are projected on the ways in which activity is developed within the forest entities and not only. Regulations in force, besides highlighting the forest entities' interests, also include all precautions in the conduct of forestry activities in ungrounded ways and the emergence of some adverse events.

**Keywords:** forest entities, legal framework, legal status of operation

**JEL classification:** M40 – M: Business Administration and Business Economics; Marketing; Accounting, M40: General.

### 1. Introduction

Although economic activity is that performing production tools, consumer goods, works, services and even the social structure in which men live, all related actions shall comply with certain laws in force at the time. On the other hand, in the future there will survive only those people who will manage to accomplish additional needs based on a legal ground, using most effectively the resources included in the economic circuit and reducing, as far as possible, the consumption of limited resources to achieve the effects resulting from an economic and social action useful to a society. Thus, even in the field of forestry, whatever the choice, this implies both a gain and a waiver and streamlining economic activity requires the efficient meet of the needs in a continuous growing and diversifying with the limited resources available. "The chapters" they have started to interfere in are: management, conservation and restoration of forests, without neglecting the possibilities of intersecting national or global forest interests with local

populations' interests. The starting point in the orientation towards these directions has been considered the hypothesis that a healthy forest can not mean anything but a healthy society. Therefore, any simple or complex human activity, repeatable or unrepeatable complies with one or more specific laws.

## **2. Methodology and motivation research**

The scientific actions taken in developing this paper, are reinforced with scientific arguments based on the information gathered from literature, from regulations, various documents, international databases and other sources deemed relevant to the theme of research, using research methods as documentation, comparison, analysis, synthesis, methods of mediated collection of data found in presentation and dissemination documents, reports, studies, summaries, methods specific to positivism employment in terms of epistemological positioning. It is worth mentioning the fact that it is difficult to address all the issues related to research theme, limitations due to certain barriers encountered during the research such as practical documentation difficulties encountered in some national forest entities or in other states. The motivation for studying this matter is determined by several factors, including: the observation that society as a whole needs a "healthy" forest system in all aspects - economic, legal, etc., idea generalized in most countries, elements of personal, cultural nature, etc. In seeking to clarify the motivation elements, it may be mentioned that the problems that Romanian economy is currently facing start from the share of the entire national economy, continue with the problem of forest profitability, the problem of legal framework which is sometimes incoherent, establishing the forestry operation regime and the forest entities status, as well as incorporating sustainable development in forestry and regional and global development strategies.

## **3. Forest entities' legal status of operation**

Performing an activity in a field of activity or another, requires full knowledge of the legislation in force, the regulations on every undertaken action, knowing the legal framework for establishing the entities having a significant contribution. The legal framework of forest entities operation is a complex concept comprising three basic components: the system of laws to which the forest entity in question relates, the legal framework by which home market is correlated with external markets, and all the institutions responsible for establishing the framework in which the entity may conduct its activity. In Romania, in accordance with existing legislation, the following legal forms can be chosen, each with its own features, advantages and disadvantages: PFA, AF, RA, OC or SC, but the legal form that can be identified with forest entities in our country, up to present, is the autonomous type.

If we analyze the entities type situation by legal status registered in the Trade Register in Romania during the period prior to the infiltration of economical- financial crisis in global economy, so before 2006, the situation may be presented schematically as follows:

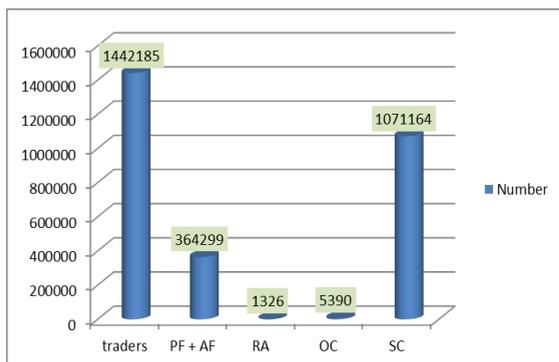


Figure 1. Fragmentation of the number of entities registered with the Trade Register in Romania between 1990-2006.

Figure 2. The shares held by different entities registered with the Trade Register in Romania between 1990-2006 in the total number.

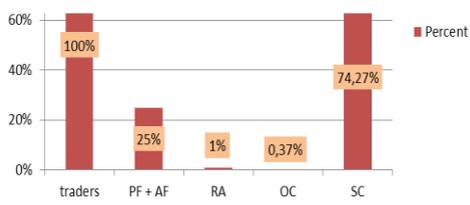
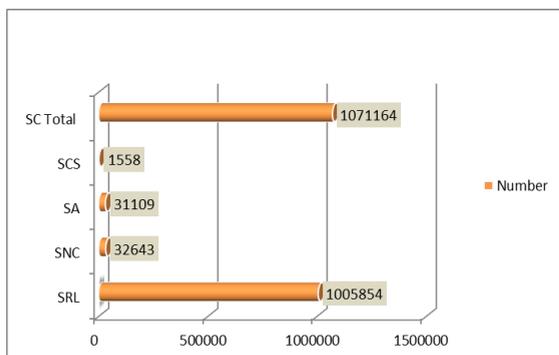


Figure 3. Segmentation of the number of trading companies registered with the Trade Register in Romania between 1990-2006, on constituent parts.

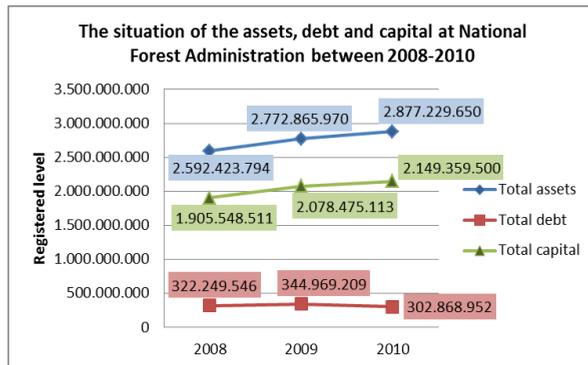


The source for figures. 1.- 3.: processing data "Statistical Summary - Operations in the Central Trading Register", drafted by the National Trade Register Office, Bucharest, data taken from the Process of setting up business in Romania, Radu Vasilica accessed on <http://steconomice.uoradea.ro/anale/volume/2006/management-si-marketing/40.pdf>, 07.12.2011.

From the above figures, we can see that entities registered with the Trade Register (CR) in Romania prior to the installation of economical-financial crisis, with the largest share are the trading companies, the most of them being the SRL, while at the first sight, the number of autonomous administrations has no significant importance and no outstanding contribution among all the entities in Romania. Nevertheless, the autonomous administrations in Romania have a special importance due to the size of the heritage that they own/manage.

Trying to analyze the situation of entities between 2006 - 2010, we can see that in time, the situation evolution is not regular but rather a sinusoidal evolution, meaning that since 2008 - the year when the global financial and economic crisis started, in Romania, the number of trading companies has dropped because of two aspects: exclusion of some companies due to their inability to withstand market conditions during the difficult period of crisis and then due to investors' lack of confidence in Romanian economy that would have determined other companies

registered at CR; this is the reason why we considered as more relevant the analysis of the number of entities by legal categories in consecutive and similar periods of time in terms of national/international/global economic and financial conditions. Continuing this analysis for forest entities, it may be noted that although their number does not have the same irregular fluctuations, problems that manifest in this area are still sensitive and significant, requiring constant research to find relevant solutions in different situations. Specifically, in an attempt to synthesize and study the size of forest heritage managed by National Forest Administration as a whole and, turning our attention only on the assets, debt and capital, the situation could be outlined as follows:



**Figure 4.** The situation of assets, debt and capital at NFA between 2008 - 2010  
Source: processing the data from the financial statements of the National Forest Administration for the three financial years

From the data in the figure above, it appears that behind the figures recorded there is the extremely complex task of the National Forest Administration (NFA) to manage assets effectively and sustainably, to monitor and analyze the situation of debt exigibility, so that from both economical and especially social point of view, the overall situation of the heritage managed by the NFA to be improved, benefited and increased. Therefore, although from Figure 1. and Figure 2., it initially seems that we can draw only the idea that autonomous administrations are few in number or percentage of total entities in Romania, this can be completed by the observation that, in what the heritage owned or managed by autonomous administrations is concerned, the situation is not so simple, but they, by cumulation record high values of significant heritage categories such as assets, debt and total capital.

Thus, directing our attention towards the specific of forest entities, it is worth mentioning some aspects related to current organization of the Department of Forests. In this regard, we note that after December 2000, according to the organizational structure provided by the previous Government, the Forest Department was transferred from the former Ministry of Water, Forests and Environmental Protection (MWFEP) to the Ministry of Agriculture, Food and Forestry (MAFF) by Governmental Decision no. 12/4.01.2001 on the structure and organization of the Ministry of Agriculture, Food and Forestry and also on its functioning method. Subsequently, following another Governmental Decision, the Ministry of Agriculture, Food and Forestry has been transformed into the Ministry of

Agriculture, Forestry and Rural Development (MAFRD), involving then other organizational changes.

Taking forest entities' legal status of operation into account, it may be noticed that in Romania they employ their activity in relation to respecting the specific of autonomous administrations according to Law no.15/1990, with subsequent amendments and completions including issues on the treatment of economic entities, owned by the state and exercising the role/function as autonomous administrations or trading companies. According to the legislative act mentioned, in our country autonomous administrations are organized and work in various areas of strategic branches of national economy set by government. These autonomous administrations are formed and operate, perform the tasks/roles for which they were established, based on economic management, so that they have the responsibility to manage all the goods/material resources and/or money, operating on financial autonomy principle or basis, having the possibility to be set up by government decision for those of national importance, or by decisions adopted by the county councils or by municipal bodies from the state administration, in case of local interest, from the branches and areas outlined by the government.

The same law provides that when establishing an autonomous administration, the business, assets, name and head office will also be established, enabling the foundation in this structure of other subunits needed for achieving the business object. The entry of real estate owned by autonomous administration, owned by third parties by official transfer of ownership, or conclusion of agreements/transactions for situations that need to be solved in a trial by the courts of law or of some litigations having a value size of more than 10 million lei is made with the approval of the competent ministry.

Specifically, in MAFRD, according to Governmental Decision no. 229/2009 on reorganization of the National Forest Administration – Romsilva and approval of the organization and operation regulations, forest management will be the responsibility of National Forest Administration, currently consisting of a number of 41 Forestry Departments plus research-development Resort for fur animal breeding in Târgu-Mureş. National Forest Administration - Romsilva is autonomous administration of national interest under state authority, by the central public authority responsible for forestry and application of national strategy in the field of forestry being its business object, acting to preserve, protect and develop forests – management of game, of fish in mountain waters and superior capitalization of other forest products. In the structure of the National Forest Administration there are territorial units without legal personality - forestry departments and research-development Resort for fur animal breeding in Târgu-Mureş - and units with legal personality such as: F.R.M.P.I. Bucharest (Forest Research and Management Planning Institute), etc. National Forest Administration is dependent on self financing and should cover all its expenses from income, including those from investment, afforestation etc. Romanian forest fund is about 27% of the country with a total area of 6.5 million ha, of which 3.4 million ha is public property, and from the area of 6.3 million ha covered with forest, only 3, 3 million ha is public property. Forest area is 0.27 ha/capita, a figure located below the average of European continent of 0.30 ha/capita.

On the other hand, Law no.15/1990 stipulates that an autonomous administration develops annually the three financial basic elements: the income and expenditure budget, the balance sheet, profit and loss account, plus other components of financial statements and even other financial overviews if this is the case, drawn up

according to the forms or models specified by the Ministry of Finance. It is worth mentioning that the balance sheet and profit and loss account of the autonomous administration are handed to the Ministry of Finance, or, where appropriate, to local financial departments in the jurisdiction of which the headquarter in question is situated, in order to be endorsed. Talking about the same financial items, it may be reminded that the balance sheet and the profit and loss account of the autonomous administration established on a national scale/level should be drawn up, displayed and published in the Official Gazette of Romania, Part III, issues which the autonomous administrations of local importance are not exempt from, noting that in this case their publication and printing will be done/found in the local press. Also, to find funds that provide financing potential losses/deficits or their covering, the autonomous administrations can "enjoy" the grants provided from the state budget or local budgets as subsidies, if the funds anticipated/provided in these budgets offer the solution, or can turn to loans/bank credits. An issue that can not be overlooked by the autonomous administrations in receiving state subsidies is that they must be used exclusively in meeting the purposes they were given/granted, without any deviation in this regard.

Throughout the legislative act, references to receipts and payments operations carried out by the autonomous administrations can be found, establishing the management board, the obligations of its members, term of office, etc. It should be noted that annually, in the first month of a new financial year, the management board give notice to the related ministry or regional/local territorial administration of a synthesis run by that administration during the previous year and an estimating report about the activities that are expected to be conducted in the current financial year. This report submitted by the NFA is laborious, including detailed references on all significant aspects of the administration related to the previous year or the current one.

On the other hand, in Romania, a special case is that of private forest districts which, up to this moment are either subordinated to Local Councils or belonging to monasteries. Thus, forest districts subordinated to Local Councils, as a legal form, are still autonomous administrations which manage the public forest fund given to that local community and monasteries forest heritage, in most cases, is given to be managed by some forest districts subordinated to the National Forest Administration or by other private forest districts subordinated by the Local Councils, and in few cases, monasteries have established a private forest district. Although the establishment of these private districts is relatively recent, it appears that most specialists in forestry and environment, technicians, officials of the Romanian Government, research centers, NGOs, as is the case Ecopolis Center for Sustainable Policies (<http://www.universulpadurii.ro/index.php?article&sid = 27097>, accessed on 27.04.2012), concluded that the situation did not follow the course desired by those who decided upon this procedure, but just the opposite, illegal deforestation is more extended in recent private forest districts, even if at national level, by now there is no percentage or value level of illegal deforestation on the Romanian territory, there are only approximate percentage situations carried out in the county or region where there was a correlation between forest area and deforestation made both in private forest districts and in the forest districts subordinated to the National Forest Administration. For this reason, at present, as shown in the studies of Ecopolis Center for Sustainable Policies, many practitioners who have in sight the concept of sustainable development, consider as a basic

necessity a rethinking of forest regime, especially organizational and less likely as a legal form. A possible solution would be picturing a way to organize the forest districts subordinated to the National Forest Administration in regions (as is the case with universities in Romania to achieve the requirements and provisions of Law No. 1 of 2011 - National Education Law, No. 1 of 2011, published in Official Gazette, Part I, no. 18 of 10 January 2011 - which renders the essential even in the content of the principles on which the national education system is based on, according to art. 118 of the law) and the search for solutions to assimilate private current forest districts, so that the most effective strategies as long-term effects can be better planned, implemented and then reviewed in an area with many implications in social life as the field of forestry, all based on the idea that "many hands make light work and the effect still increases".

Trying to synthesize the legal organization of forest entities in other states, to achieve a spatial analysis of these entities, we can notice that there are many similarities between the treatment of forest entities in our country and those of other EU countries, USA, etc.

For example, in Germany, the State Forestry Administration is subordinated to the Ministry of Food, Agriculture and Forestry and has one administration for each province/region. For example, in Bavaria region the Administration is responsible for all aspects of forest in Bavaria. Such an administration conducts a dialog with the landowners, citizens and social groups of interest to determine interests and appropriate solutions for sustainable development policies of the forestry sector; somewhat similar to the forests given to be managed by the National Forest Administration or by other private forests districts subordinated to Local Councils from our country. Wood industry in Bavaria region involves a work force of 156.000 people, and the number of employees in the timber trade can be calculated according to the statistics of Federal Employment Agency, estimated at 10.000 employees. As happened in our country, the global economic crisis has affected the forestry sector and wood inclusive, which have not remained immune, resulting in less number of employees in this area with more than 10.000 people since 2006.

In Finland, the forest fund is owned by the state and managed by the Finnish National Forest Administration, otherwise, similar situation to the Romanian forest fund. In this state, forests owned by families and individuals are transmitted from generation to generation by inheritance, reason for which the Finns generally use the term of "forest family". Finnish state owns 34% of forest land, private industry owns 8% and other bodies 5%. Basically, state forests are located in the north of Finland, and 45% of them are under strict protection. Usually, the Finnish lumber stations are small and the number of lumber stations larger than 2ha is about 440.000, while the number of those over 20 ha is 26.000. The share of the lumber stations of over 100 hectares is only 9%. The number of forest owners in this country reaches 900.000, representing about one fifth of the population. About half of the lumber stations were acquired by inheritance and a private forest changes its owners, on average, every 23 years. The forest sector in Finland generates about 5.5% of Finnish GDP – while in our country agriculture, forestry and fishing all together barely manage to be about this value - and a fifth of Finland's export revenues are derived from forest industries. In the U.S., in 1905, the Forest Service was founded, which is an Agriculture Department agency that manages public lands consisting of national forests and

grasslands, the federal agency having four levels of organization:

a) Ranger District. There are more than 600 Ranger districts, each district with a staff of 10 to 100 people. Districts vary in size from 50.000 acres (20.000 hectares), to more than 1 million acres (400.000 hectares). It should be noted that in Romania, in forestry practice, there can be also found the term of district which corresponds to the surface covered by a ranger, respectively to the forest funds which are the responsibility of the subordinated foresters.

b) National Forest Administration, which is found in 44 states to manage a number of 155 national forests and 20 grasslands. Each such forest is composed of several Ranger Districts and the person responsible for a national forest is called the forest supervisor – somewhat the counterpart of the Ranger in our country. This level coordinates activities between districts, allocates the budget and provides technical support for each district.

c) Region: There are 9 regions, numbered 1 to 10, with the provision that Region 7 was eliminated some years ago. Regions are usually large geographical areas, including even more states and the person responsible is called regional forester – somehow the counterpart of the regional forester = Ranger from us, but there is no similarity in terms of covered area.

d) At national level, this is known as the Washington Office. The person who oversees the entire Forest Service is called chief, being a federal employee working with the President Administration to develop a budget to submit it to the Congress, during the Congress also providing information on what was done and even monitoring the activities of the Agency.

If you consider the "forest system" in Canada, Forest Service is a department of the Canadian Government to shape the natural resource contributions to the overall country economy, in society and on the environment. During more than a century, the Forest Service has conducted research on the health of forests in Canada with the purpose to ensure that forest sector needs are met, and also the satisfaction of economic, social and/or cultural needs of the future generations are not compromised. Forest lands in Canada, other wooded lands and other lands with trees stretch for about half the country's lands, reaching an area of nearly 400 million hectares. Canadian Forest Service works with the provinces and the territories to ensure that the nation's resources are managed sustainably and in a way that optimizes benefits for all. Forest industry in Canada has approximately 600.000 people and the Canadian forest products range from raw materials, logs, lumber, structural panels, softwood, cellulose and paper to an increasing series of bioproducts including mushrooms, plant extracts, resins. Canada is the third supplier of forest products in the world after Germany and the United States of America. One thing worth noticed is the unquestionable importance that the Canadian state allocates both to research in general and research within the field of forestry, chapter in which the Romanian state is still lacking both in research in general and the situation of research activity in forestry, although the scientific literature frequently reminds of the hypothesis/principle that a nation cannot evolve/progress economically, socially, etc. without being based on well-founded and developed research.

If the spatial analysis of the organization and functioning of forest entities will be spread over several countries, continents, it will be seen that can be identified both similarities and specific features of each area, features that will leave a significant mark on the efficiency of forest activity in each country. Overall, however, it appears

that following the review of the functioning and organization of forest entities of the states above, we may conclude:

Table no. 1. Identifying common and differentiated elements of organization and functioning of forest entities in the analyzed countries

Analyzed country <ul style="list-style-type: none"> <li>• Romania;</li> <li>• Germany</li> <li>• Finland;</li> <li>• U.S.A.;</li> <li>• Canada.</li> </ul>	Common elements
	a common element of all countries is the basic principle of legal functioning and organization, plus the management element: the forest
	Differentiated elements
	one of the elements that differentiates the analyzed countries is the area an organization form lies on, respectively the forest fund area managed by it.

Source: synthesis by the author after studying the organization and legal functioning of forest entities of the analyzed in the text above.

In an attempt to outline the above issues relating to "Legal treatments in forest resource management", there have been found similarities and differences even regarding the definition of "forest" – component part of the forest fund with the land meant for afforestation, ponds, etc.. In the world, the forest is currently defined as "an area of more than 0.5 ha covered by trees of more than 5m in height and consistency of at least 0.1 or trees which are able to reach these limits in normal circumstances" (after World Forest Resource Assessment, 2005 of IUFRO, 2005). In Romania, according to the Forest Code are considered forests "the lands with an area of at least 0.25 ha, covered with trees, which provides a consistency of at least 0.1; trees must reach a minimum height of 5m at maturity, in normal growing season conditions. " Another aspect found during research is that the European Union has defined a community strategy to include the issue of environment in economic policy using different instruments as the market mechanism, Member States reporting annually to EU Commission economic policies developed in this respect (Peter Condrea, Ionel Bostan, 2008).

#### 4. Conclusions and research perspectives

Therefore, it may be stated that all rules governing the rights and obligations of forest entities will involve outlining all specific legal attributes of these economic units which will reflect the effects on the performed activity and on performance resulting from undertaken activity. Thus, all involved in one way or another in the activity of Romanian forest entities should make every effort, ability, means they have or they can draw to achieve the goals that were established at the time of their establishment, the more so as there is the example of other states that have managed to own an effective and sustainable 'forest system'. Tributary to what has been mentioned, the great Romanian forester, Dracea Marin, said that "Forests are primarily earth peace, agriculture shield and good work guarantee of that time and, as such, one of the reasons for the existence of the Romanian people". The integrity of the forest system is given by all flows of information, money, raw materials etc. existing between the forests cultivation system, exploitation, industrialization and final consumers, integrity that will only be maintained through a close relationship of these components. Regarding the organization of state economic entities in the forest filed as autonomous administrations and not as trading companies, they are

given, among others, the possibility to receive grants from the state budget or local budgets in case of deadlock situations, within the funds limit provided in their budgets and which may be used only to overcome the moments for which they were received, as also required in art. 9 of Law No. 15/1990. On the other hand, some differences between the autonomous administrations, trading companies and public institutions could be: non-profit organization, do not produce any benefit; public revenues consist of taxes and fees plus other income set by law, while those of autonomous administrations and trading companies come from performed work, rendered services and other activities, documents related to conducting business are differentiated according to the specific of each type of entity, existing some general similarities regarding the information carriers, what in future could determine a basis for the development of a research paper on the advantages and disadvantages of the entities of autonomous administration type that could be considered or placed in the sphere of some "pearls of the economy" or by the "black holes" of the economy.

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# NEW CORPORATE REPORTING TRENDS. ANALYSIS ON THE EVOLUTION OF INTEGRATED REPORTING

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**Abstract:** *The objective of this paper is to present the new corporate reporting trends of the 21<sup>st</sup> century. Integrated reporting has been launched through a common initiative of the International Integrated Reporting Committee and global accounting organizations. However, the history of integrated reports starts before the initiative of the IIRC, and goes back in time when large corporations began to disclose sustainability and corporate social responsibility information. Further on, we claim that the initial sustainability and CSR reports that were issued separate along with the financial annual report represent the predecessors of the current integrated reports. The paper consists of a literature review analysis on the evolution of integrated reporting, from the first stage of international non-financial initiatives, up to the current state of a single integrated annual report. In order to understand the background of integrated reporting we analyze the most relevant research papers on corporate reporting, focusing on the international organizations' perspective on non-financial reporting, in general, and integrated reporting, in particular. Based on the literature overview, we subtracted the essential information for setting the framework of the integrated reporting evolution. The findings suggest that we can delimitate three main stages in the evolution of integrated reports, namely: the non-financial reporting initiatives, the sustainability era, and the revolution of integrated reporting. We illustrate these results by presenting each relevant point in the history of integrated reporting on a time scale axis, developed with the purpose of defining the road to integrated reporting at theoretical, empirical, and practical levels. We consider the current investigation as relevant for future studies concerning integrated reports, as this is a new area of research still in its infancy. The originality of the research derives from the novelty of integrated reporting, and the aim to explain its origin, which is important to know if we want to understand the present and the future of corporate reporting.*

**Keywords:** non-financial information, sustainability and social responsibility, integrated reporting.

**JEL classification:** M41, M14.

## 1. Introduction

The paper presents the stages of integrated reporting evolution: international non-financial reporting initiatives, sustainability and CSR era, and finally the emergence of integrated reports.

On the background of 21st century challenges of globalization, pollution, resource scarcity, and other negative effects that affect current and future generations, some of the most prominent professional organizations – Federation of European

Accountants, European Financial Reporting Advisory Group, Sustainability Accounting Standards Board, Climate Disclosure Standards Board, International Integrated Reporting Committee, Federation of European Accountants - have decided to take action and replied by implementing non-financial reporting initiatives.

The measures undertaken by international organizations generated a period of 20 years when corporations continuously improved their reporting strategies for non-financial information disclosure. Therefore, corporate non-financial reporting has developed from predominately single-issue reports that were mostly environmentally focused, to multi-issue reports or sustainability reports. Currently, this trend towards multi-issue reporting goes further towards *integrated reporting*, which means sustainability reporting integrated within the financial or annual report. This could be one of the major topics in the debate on the future of sustainability reporting.

In order to provide a deep understanding of the concept of integrated reporting we have gathered various definitions, opinions and facts upon the concept of integrated reporting.

## **2. Literature review**

### **2.1. Non-financial reporting practices**

Non-financial reporting had a remarkable evolution in time, both on regulation side and in practice.

In 2008, KPMG was conducting a study on the corporate reporting trends followed by the top 250 companies of the Fortune 500 and top 100 companies from 16 countries. They found that 77% of the sample companies implemented GRI guidelines while more than 80% issued sustainability reports (KPMG, 2008). In only one year, this number grew to approximately 1.400 corporations that according to Eccles & Saltzman (2011) published non-financial information. The scholars also mention that during the period 2008- 2010, the promoters and early adopter of non-financial reporting enlarged by 29%.

The financial crisis has changed the perspective upon the world economy, so that many called for a sustainable approach to rebalance the economy. In 2010, the UN Global Compact Leaders' Summit militated for sustainability and non-financial reporting (UN Global Compact-Accenture, 2010).

### **2.2. Setting up regulations for non-financial reporting**

If until now we discussed the implications of the corporate reporting practice, the following mentions refer to the initiatives in the form of regulations for non-financial information.

One of the most prominent regulations was entered by France that created a framework for sustainability reporting within its Nouvelles Regulations Economiques. The United States issued the Sarbanes–Oxley Act in 2002 enforcing, among others, environmental information disclosure. Denmark prepared a set of rules for sustainability reporting that are included in the Danish Financial Statements Act, while Sweden adopted mandatory sustainability reporting for public companies.

On the European scale, we note the European Commission and business community initiative that have built the European Alliance for Corporate Social

Responsibility in 2006, an organization that acts as promoter for corporate social responsibility and social-environmental integration.

In addition, TMX Group, NYSE Euronext, BM & FBOVESPA, Bourse de Luxembourg promote sustainability reporting. Further on, Johannesburg Stock Exchange mandates non-financial reporting and Bursa Malaysia has a series of corporate social responsibility requirements. If in Singapore public companies have to apply sustainability reporting on a voluntary basis, Shanghai stock exchanges introduced mandatory environmental disclosure.

### **2.3. Early literature on integrated reporting and non-financial information**

We argue that non-financial information is as much valuable as the financial one.

From the investors' perspective, the value of the extra financial information is beginning to increase in importance. This statement is supported by Clements & Brown (2012) who claim that ESG integration in long term strategy financial plans determines shareholder value. Radley (2012) mentions that nowadays decision making processes are influenced by socially responsible investors and socially responsible investment analysts. This perspective outlines the relevance of non-financial performance in the analysis of financial and extra-financial information. In testing the non-financial impacts, investors and analysts consider the following information: governance, natural resources, social and community, capital (human, intellectual). In addition, the Moody's and Standard & Poor rating agencies favor sustainability reporting practices, developing ratings and indices on sustainability for measuring sustainability.

After a considerable overview on the actual need of the non-financial information (sustainability, corporate social responsibility reporting), we start a discussion on integrated reporting and its connection to sustainability. Mentioned for the first time by White (2005) in his study on corporations' reports, *integrated reporting* has known a continuous evolution as scholars and academics, as well as international organizations, became interested in research that implies the sphere of integrated reports. A study on ASX 50 listed organizations from Australia reveal six criteria for measuring the level of IR (ACCA, 2011: 13): mission and strategy, management approach, performance tracking, risk management, stakeholder engagement, format public reporting. Maroun and Solomon (2012) discuss mandatory integrated reporting for 10 South African corporations, aiming to find if mandatory requirements influence the level of IR disclosure. Eccles et al. (2010) explains how corporations can adopt integrated reporting practices. Integrated reporting can be described as a mixture of integrated thinking, stewardship for manufactured, human, intellectual, natural and social capital, strategic objectives and value creation, long term vision, transparency and trust, flexibility, avoiding complex and extended reports, and implementing technologies and innovation (Farrar, 2011), disclosure of forward-looking information, assurance on the quality of this type of information, annual presentation, positive aspects and challenges, holistic and integrated view on financial and sustainability elements, performance areas as subject for reporting integration, assurance on material sustainability or non-financial issues (Rossouw, 2011).

Eccles et al. (2010) defines integrated reporting as the process of ESG integration into the annual report of the companies. Deloitte Touche Toohmatsu Limited (Deloitte, 2011) understand integrated report as a means of presenting the story of the organization, that falls in the responsibility of the CFO and should contain

sustainability elements (Ernst & Young, 2011). The International Integrated Reporting Committee- IIRC, sets integrated reporting at the intersection between strategy, financial performance, governance, and social, environmental, and economic pillars (Robinson and Tinker, 1998), so that stakeholders can have a complete picture of the organizations financial and non-financial performance (Deloitte, 2011).

Nowadays, corporations practice integrated reporting, though there is no framework for the components of an integrated reports nor available standards or regulations. Loska (2010) considers that integrated reporting will lead to new standards in the area of non-financial reporting, although international organizations still have to face a series of challenges, in particular: stakeholder engagement and effective communication, connection between financial and non-financial information, establishing the IFRS perspective upon integrated reporting, and finally, the definition of sustainability. However, the IIRC is committed to develop a framework for integrated reports and has already issued a series of principles and content elements that should suit any proper integrated report. They are implementing a pilot program that surveys the adoption of integrated reporting. Up to now, more than 75 organizations have joined the IIRC pilot program. All of these early adopters issued integrated reports during the period 2009-2012. The main determinants of integrated reporting have been: engagement with shareholders, a strong commitment to sustainability cause, developing a “sustainable strategy” (Eccles & Saltzman, 2011: 58), and the perspective of social responsibility investors (Radley, 2012).

### **3. Methodology**

We engage in a systematic literature review analysis with the purpose of identifying the most relevant stages of the evolution of integrated reporting. Therefore, we set up our framework based on the overview of corporate non-financial reporting, sustainability, and CSR literature, as well as previous empirical studies in the field of IR. We build our case mainly on the background sustainability literature, as integrated reporting is in its early development stage. Organizations that adopt integrated reporting cannot rely on reporting standards or an agreed set of guidelines. Thus, in this particular situation, practice precedes theory and the subjects that follow on IR can contribute to the development of mandatory or voluntary requirements in the field.

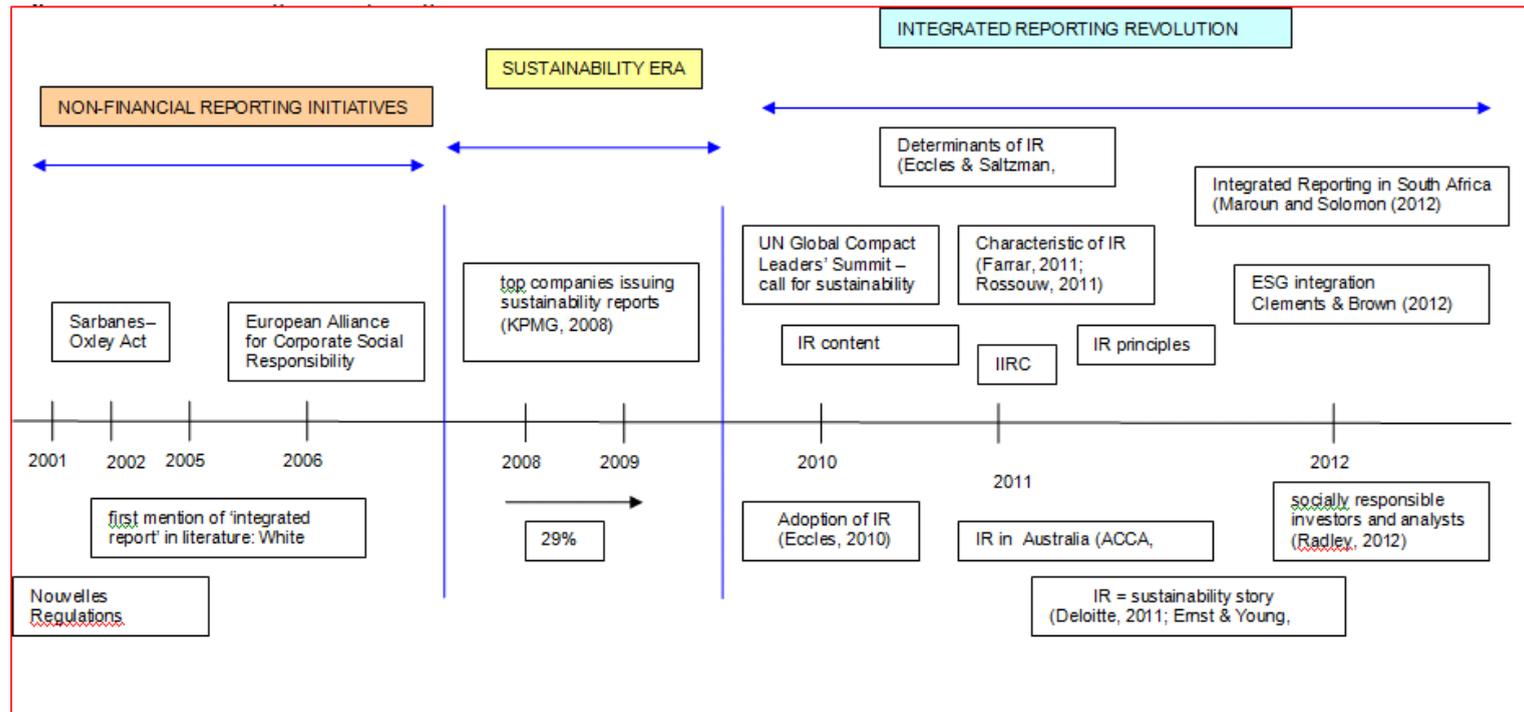
### **4. Findings**

The analysis on integrated reporting (Figure1.) revealed the existence of three stages in corporate reporting literature: (1) *non-financial reporting initiatives*; (2) *sustainability era*; (3) *integrated reporting revolution*. Therefore, the period 2001-2006 has been subject for various non-financial reporting regulations issued at both national and international level. As a consequence, companies were beginning to report on sustainability facts in 2007 and the number of sustainability/social responsibility reports continued to increase a year later. Early literature on integrated reporting debuted in 2010, in a period when world events were changing the perspective on extra-financial information. In 2011, the IIRC issued its first *Exposure Draft* on integrated reporting, mentioning the *content elements* and *principles* for integrated reports. During 2010- 2012, scholars and academics

developed theoretical and empirical studies in the field of integrated reporting. Their research involved mainly the subjects of IR determinants, adoption, and characteristics. More specific studies concentrate on the stage of integrated reporting with respect to a certain country (e.g. South Africa – with mandatory IR or Australia – IR on a voluntary basis). Others approach the process of ESG – environmental, sustainability, and governance- integration or the role of non-financial information in the decision making process when socially responsible investors and analysis are involved.

Finally, we agree that the evolution of integrated reporting shows in fact the *road to integrated reporting*, from early regulation initiatives, to sustainability implementation, and in the end, the single report containing both financial and non-financial information.

**Figure 1: The Road to Integrated Reporting**



Source: authors' compilation

## 5. Conclusions

The current research was meant to present the stages of integrated reporting evolution. Reviewing the most relevant literature in the field of non-financial reporting, sustainability/corporate social responsibility, and integrated reporting, we identified three main coordinates for IR: the international non-financial reporting initiatives, the sustainability era, and the IR revolution. In addition, the paper brings a deeper understanding upon the process of integrated reporting adoption, providing in the same time evidence on how this new reporting trend emerged both in theory and practice. The paper outlines research developed by scholars and academics as well as surveys and studies conducted by international organizations. The background literature in the area of integrated reporting suggests that organizations practices have preceded theory, as corporations have started to apply IR in the absence of standards and regulations. However, a common framework is necessary for the future development of integrated reporting. Therefore, the emergence of integrated reporting trend is limited by the gap between practice and regulation. From a regulatory perspective, the debate on voluntary versus mandatory integrated reporting remains an open question for the international corporate reporting environment. Some countries and stock exchanges already adopted mandatory integrated reporting, while other states and organizations militate for voluntary IR requirements. Voluntary or mandatory, we argue that integrated reporting should be assisted by a new set of global corporate reporting standards that would improve the IR practice and lead ahead the evolution of IR. We conclude by adding that is essential to know the history of integrated reporting, in order to understand the current reporting practices, and to be able to forecast future evolutions of corporate reporting.

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# ACCOUNTING TREATMENTS ON FORESTRY SPECIAL FUNDS AND SPECIFIC PROBLEMS IN ROMANIA

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**Abstract:** *This study, theoretically and practically, presents the accounting system for forestry special purpose funds in Romania. In addition, the main problems Romanian forestry faces nowadays are highlighted in the content, given the legislative changes expected in the near future. Accounting treatments specific to Romanian forestry regarding special funds, namely the conservation and regeneration fund, the accessibility fund, the environmental fund and the improvement fund are governed in the current law, mainly by the Forestry Code in Romania - Law 46/2008 supplemented by other specialized works used within the National Forest Directorate in Romania. Among the specific forestry regulations, special purpose funds are an area of interest in the current economic crisis being presented under several aspects: establishing the Fund, its utility and calculation method, its recording into accounting, or its specific tax implications. The main objective of this paper is to provide both a framework for analysis and presentation of the problems faced by forestry activity in Romania, and the accounting treatments specific to forestry activities, by illustrating the main entries made through financial and accounting documents. Given that we fully realize the environment's importance in our lives, we understand the very close relationship between the forestry business' enactment, its financing and its supervision. Special funds are the basis for financing forestry projects. Their study covers a gap in the specialized literature, providing specialists, practitioners and other stakeholders a framework. In the current economic and political context, the forestry problems, environmental issues in general are perceived to be more stringent. The solutions identified as a firm response to the existing problems are therefore of major importance, of which, in this study, we have identified and proposed several solutions. Practical examples have as grounds real data extracted from invoices, and the accounting items correspond to the National Forest Directorate.*

**Keywords:** *accounting, environmental issues, forestry, forestry funds, special purpose funds.*

**JEL classification:** *M41, G28, E62.*

## 1. Introduction

The study's main objective is to identify and present many current concerns regarding forestry activities in Romania, and to present the accounting treatments specific to special funds in forestry with practical examples.

The paper presents the regulation and operation of funds specific to forestry under the Romanian accounting legislation and the current issues of the forest system. However, in terms of funds and from an accounting point of view, the adjustment of Romsilva National Forest Directorate in Romania to the rules of the Minister of Public

Finance Order no. 3055/2009 with subsequent amendments and additions in force on that date is described in detail. We believe that special funds intended for financing various forestry activities in Romania are not investigated sufficiently in the specialized literature. Underfunding is a common problem in conditions of economic crisis, like the one we are going through now, and without a clearly identified horizon, we can as a first matter study and review *the existing funding sources, in our case the special forestry funds*.

Therefore, we consider appropriate to approach the subject, as the forest sector issues are current in 2013, and the examples in this study may be useful to specialists.

## **2. Research methodology**

The method used in our research is mainly based on descriptive analysis and on the dynamic comparison method, in order to highlight the specific problems the forestry sector faces and the accounting treatments specific to forestry in Romania.

The data used in this paper comes mainly from legal sources regulating forestry activities in Romania (Forestry Code), in conjunction with OMPF 3055/2009, which currently regulates accounting in Romania, completed by economy and accounting specialized works, applied in forestry. However, for the examples in Chapter 4, accounting data from the central forestry unit in the country was used, namely the National Forest Directorate (NFD), thus emphasizing specifically the processing and recording of financial-accounting information in forestry.

## **3. Aspects of the current problems of the Romanian forestry sector**

In Romanian forestry, there currently are a number of factors negatively influencing standing crops, of which we can mention:

1. Excessive exploitation of standing crops, increasing in the last 6 years;
2. Low concern for providing an adequate legal framework for the Romanian forest sector issues;
3. Insufficient concern for artificial regeneration of forests, limiting logging and creating forest belts;
4. Reviewing and adapting the funding sources to the current needs for the forestry sector;

According to the representative of Romsilva National Forest Directorate, Chief Engineer Dr. Adam Crăciunescu, 2012 was a good year for forestry, concluded in terms of profitability under the specific indicators. However, according to the estimates, 2013 will be a year of reforms in the Romanian forestry. The current concern for reforming administration appears in the context of the area administered by the overhead is decreasing. In the future, about 40,000 ha will be returned to former owners, which will certainly lead to a considerable decrease of turnover. The stated objective for 2013 is that of "increasing management efficiency, improving technical works and providing optimal conditions for the young trees to carry out their functions" (Adam Crăciunescu, 2012, page 3). The same author points out other flaws in the Romanian forestry, such as organizing a forest guard, the forest development activities or implementation of the "due diligence" European regulation on placing the wood on the market. The resources of Romsilva NFD, at this time, as many other branches of the national economy are currently underfunded, Chief Engineer Dr. Adam Crăciunescu stating that *"investment activity is a priority [...] own resources are far from sufficient, as well as the public ones. This is why the own*

*development resource is intended primarily to provide modern productive equipment for all our activities. We need to continually improve the level of mechanization of forest works, starting with those of forest nursery culture, land and soil preparation, planting new trees and caring for the young forest, wood exploitation, transport and manufacture”* (Adam Crăciunescu, 2012, page 4).

Another forestry problem is the national system’s need for forest belts. Academician Victor Giurgiu emphasizes the issue of financing forestry, calling it “feeble and uncertain funding”, which, although it is provided by the Forestry Code law through special funds, is “formal” (Victor Giurgiu, 2012, page 14).

The importance of forests for the Romanian culture and civilization is known and recognized on the local realm. Thus, within the popular Romanian consciousness, there existed the expression “the forest, the Romanian’s brother”, expressed by the great national poet Mihai Eminescu in the poem *Doina*. Unfortunately, the Romanian forest is currently suffering because of legislation inability to stop the phenomena such as illegal logging and other loopholes. On medium and long term, deforestation “represents disasters caused by indifference and recklessness with serious effects over time and space on the natural environment, society and economy. Deforestation’s consequences are severe: landslides, soil desertification, climate destabilization (global warming, green-house effect), extinction of many species, showing serious and severe conditions (storms, hurricanes), etc.” (Dacina Crina Petrescu, 2009, page 180).

According to the Statistical Yearbook of Romania (2012, pages 446-447), Romania’s total forest in 2011 is of 6.519 million hectares. A first negative statistical particular sign, designed to raise questions is the decline of forests’ artificial regenerations, from 15,533 hectares in 2006 to 11,499 hectares in 2011, 25.97% less. As a negative effect, corroborated to the previous observations, the surface covered with felling in our country in 2011 amounts to a total of 107,690 hectares, compared to 86,167 hectares in 2006, increasing by 24.97% over 2006. In addition, the total volume of wood exploited by forestry traders in 2011 is 16,204,000 cubic meters, compared to 11.739 million cubic meters in 2006, 38% more.

As forests are an important long-term factor in balancing the Romanian natural ecosystem, noting the significant increase in timber harvesting between 2006 and 2011 (38%), the decrease of artificial regenerations by 26%, and the increase of the area covered with felling by 25 %, we can conclude that the ecosystem in Romania will seriously suffer over time. Viable solutions to existing problems can be found only if the technical, financing and legal sources are identified in order to protect this great national wealth of Romania, which is the forest.

#### **4. Accounting treatments on forest funds**

In this section of the paper, we shall theoretically and practically present the funds specific to forestry. In forestry, by law, there are four types of special funds: *the conservation and regeneration fund, the accessibility fund, the environmental and the improvement fund.*

##### **4.1. The conservation and regeneration fund**

Under Article 33 of the Forestry Code (Law 46/2008, art. 33, paragraph 1), the forests conservation and regeneration fund is established mandatory by the forest fund administrator of public property or by the forest owners. This fund, being part of the fiscal reserve system, interest bearing, tax-free and tax deductible is at the

administrator's disposal and in his account or in the forestry provider's charge. To elucidate the legal operation framework, we shall recall the formation sources of the fund, its utility and the specific accounting records with a practical example.

*The formation sources* of the fund, according to the Manual of accounting policies and application procedures consistent with OMPF 3055/2009 (2012) are:

1. "revenue from cashing the value of lands permanently removed from the standing crop;
2. revenue from cashing the value of growth losses caused by the trees logging before the exploitability age established by forest planning;
3. revenue from compensation for damages caused to the forest;
4. revenue from the payments determined by the favourable effects stemming from the protective functions of forests;
5. revenue from the sale of standing timber from the primary and accidental I products (15% - 25%)".

The above statement can be filled with art. 33, paragraph (2) of the Forestry Code, according to which, the conservation and regeneration fund of forests is formed also of "15-25% from the value of timber authorized for logging. This is derived from primary and accidental I products, calculated at the average price of a meter cube of standing timber/foot. For the State owned forests, the Romsilva National Forest Directorate establishes the annual percentage rate. For the other forms of forest ownership, the annual percentage rate shall be established, where appropriate, by the forest districts referred to in Article 10, paragraph (2). This amount is transferred by buyers/holders of operating licenses, directly in the forest administrator's account or in the one of the forest service provider" (*Forestry Code*, art. 33, paragraph 2, letter F of Law 46/2008).

**Also, article 123 of the Forestry Code provides that "the average price of a cubic meter of standing timber/foot is determined annually by order of the head of the central public authority responsible for forestry" (Law no. 46/2008 - Forestry Code).**

*The utility of the forests conservation and regeneration fund* is chiefly aimed at the forest conservation and regeneration in many ways that can be found in the forestry activity, among which we mention (*Manualul de politici contabile si proceduri de aplicare a Planului de conturi 3055/2009*, 2012; page 139, *Forestry Code - Law 48/2008, article 33, paragraph 3*):

- "regeneration of areas covered with felling;
- forestation of bare lands recorded in forest management or of those taken for forestation;
- reinstalling forest on lands temporarily occupied from the standing crop;
- carrying out relief and care works of natural regeneration and of the existing young crops;
- performing works in the forest genetic resources included in the National Catalogue of forest reproductive materials;
- covering the costs of restoring forests damaged by natural disasters;
- carrying out care works for young trees, as well as clearing and cleaning works;
- land purchasing, according to the methodology for determining the equivalent value of lands and the calculation of monetary obligations".

**The calculation method of the conservation and regeneration fund is provided in the same Forestry Code Law. According to the formula below (article 33 paragraph (2) letter f of Law 46/2008, for a 25%), a percentage between 15% and 25% may be applied:**

$$\text{Conservation fund} = \frac{T_v * A_p * 25}{125}$$

Where  $T_v$ = Timber value,  $A_p$ = Average price

After determining the values of the conservation and regeneration fund, we proceed to bookkeeping it from formation to consumption. The main accounting records to that effect, are presented in Table 1.

**Table 1:** Bookkeeping the conservation and regeneration fund

Type	Operation	Correspondent accounts according to the NFD Chart of Accounts, compliant with the OMPF 3055/2009
Formation of the conservation fund	Counter value of 15 - 25% of the meters of primary and accidental I products; operating permit (NFD/others)	65845=47211 (4622=47212)
	Counter value of land permanently removed from the standing crop, public property	65841=47211
	Increase losses	65842=47211
	50% of the rent for temporary occupation of land	65842=47211
	compensation for forest damage	65843=47211
	Counter value of conservation fund for the wood corresponding to the private property (according to contract)	65846/4622= 47212
Fund consumption	forestation and regeneration	47211=74161
	Special protection functions	47211=74162
	expenditure on forest disasters	47211=74163
	land purchases, care works, recesses, cleaning	47211=74164 47211=74166
	forest management, private property	47212=4622

Source: *Manualul de politici contabile si proceduri de aplicare a Planului de conturi 3055/2009*, 2012, page 140.

Example 1: Based on the invoice 1911/28.11.2012, the retention of the conservation and restoration fund is determined and recorded. It contains the following information:

- VAT reverse charge,
- Standing timber/foot P.1125 MICOAIA, GROSS VOLUME – 262 CM, BARK – 21 CM, NET VOLUME – 241 CM, 179.79 lei/cm, total amount 43,329.39 lei;
- Standing timber/foot P.1161 PR BATRANEI, GROSS VOLUME – 104 CM, BARK – 10 CM, NET VOLUME – 94 CM, 183,71 lei/cm, total 17268.74 lei;
- Standing timber P.1099 RUNCULEU, GROSS VOLUME – 38 CM, BARK – 2 CM, NET VOLUME – 36 CM, price 140,80 lei/cm, total 5068,80 lei;

The conservation and restoration fund is calculated in percentage to the collected amount of the invoice representing the primary + accidental I products:

Invoice no. 1911/28.11.2012 recording 404 cm wood on key accounts, results from the following calculation:

$$Cf = \frac{Tv * Ap * 25}{125} = Cf = \frac{404mc * 85lei * 25}{125} = 6.868 lei$$

Where,

*Cf= Conservation fund*

*Tv= Timber value*

*Ap= Average price (Set by law at 85 lei)*

Accounting records:

Formation of the conservation and restoration fund:

65845	=	
47211		6,868 lei
<i>"15%-25% of the proceeds realized from the sales of meters"</i>		<i>"Income from the forest regeneration fund managed by the NFD"</i>

Fund transfer to the National Forest Directorate (monthly):

	=	4812
6,868 lei		5121
<i>"Settlements from other operations"</i>		<i>"Bank accounts"</i>
47211		
=		
4812		6,868 lei
<i>"Income from the forest regeneration fund managed by the NFD"</i>		
<i>"Settlements from other operations"</i>		

## 4.2. The accessibility fund

The accessibility fund is the second of the four special funds operated in forestry. This fund is constituted in accordance with Law 56/2010 regarding the access to national standing crop. It is provided in article 4, paragraph 1, and its declared destination is the support of forest road construction and interventions to existing roads for their maintenance. The main works intended to be financed from the Fund are reconstruction, consolidation, rehabilitation, alteration and extension works (Law 56/2010, article 1).

The accessibility fund consists of the following resource (Law 56/2010, article 5):

- "(a) up to 10% of the timber sold and collected as provided by law, from the primary and accidental I products (percentage established by order of the head of the central public authority responsible for forestry)
- (b) the amount due to the administrator of the public property forestry fund, determined according to article 42 paragraph (1) letter b) of Law no. 46/2008 on Forestry Code, as amended and supplemented.

The forest accessibility fund is an interest-bearing fund.

The fund's remaining available amounts at the end of the calendar year shall be carried forward to the next year with the same destination".

Given the description of the fund, its utility is shown in article 6 (Law 56/2010, article 6):

- "designing the works of forest road construction;
- designing of intervention investments for existent forest roads;
- executing the construction works of new forest roads;
- executing the intervention-investment works for existent forest roads";

**Table 2:** Bookkeeping the accessibility fund

Operation	Correspondent accounts according to the NFD Chart of Accounts, compliant with the OMPF 3055/2009
Up to 10% of the meters of sold and collected primary and accidental I products	58711 = 475851
50% of the rent of temporary forest	65872 = 475851 475851 = 4812
For other properties	4622 = 475852

Source: *Manualul de politici contabile si proceduri de aplicare a Planului de conturi 3055/2009*, 2012, page 141.

Example 2: Based on the invoice 3546/22.08.2012, the retention of the accessibility fund is determined and recorded. The calculation of the accessibility fund is made by applying 10% to the collected invoice amount representing "primary" and "accidental I" products.

It contains the following information:

- VAT reverse charge;

- The wood derived from primary and accidental I products, 37 cm, 148 lei/cm, total 5,476 lei;
- The wood derived from secondary and accidental II products, 26 cm, 112 lei/cm, total 2,912 lei;

$$Af = \frac{Pv * 10}{110} = \frac{5476 * 10}{110} = 498 \text{ lei}$$

Where,

Af= Accessibility fund

Pv= Production value

Accounting records:

	658711	
=		475851
		498 lei
	<i>"Expenditure on extra-budgetary fund - 10%"</i>	<i>"Income from the accessibility fund"</i>

#### 4.3. The environmental fund

The environmental fund is one of the most important financial tools provided to support the environment. Thus, the environmental fund is provided by the GEO no. 15/2010, contained in Law 167/14.07.2010, being replaced at that time by the GEO 196/2005 on environmental fund.

Under current legislation, the environmental fund has the following *sources of formation* (Law no. 167/14.07.2010, article 7):

- *"a 2% contribution of the proceeds from the sale of wood and/or wood materials obtained by the administrator or by the owner of the forest, except firewood, ornamental trees and shrubs, Christmas trees, wicker and seedlings;*
- *a 3% contribution of the amount charged annually for managing hunting, paid by hunting fund managers [...]*
- *the law also provides for a 3% contribution of the revenues from the sale of ferrous and nonferrous metal scrap, including goods destined for dismantling, obtained by the scrap generator, namely the owner of the dismantling goods, natural or legal person. The amounts are paid as they are earned by the traders engaged in collecting and/or recovering waste, which are bound to transfer them to the Environmental Fund".*

**Table 3:** Bookkeeping the environmental fund

Operation	Correspondent accounts according to the NFD Chart of Accounts, compliant with the OMPF 3055/2009
Fund formation of 2% timber	658921= 44781 NFD (4622 = 44782 others)
Fund formation of 3% hunting fund charge	65892=4478
Fund formation of the invoice of waste iron arising from cassation:	4111= 708 ( reverse charge Art.160 Fiscal Code) 5121 = 4111 (97%) 4728 = 4111 (3%) 6358 = 4728

Source: Adapted from *Manualul de politici contabile si proceduri de aplicare a Planului de conturi 3055/2009*, 2012, page 141.

#### 4.4. The improvement fund

The improvement fund is the last of the four special funds. It is regulated by the Order 2353/2012 of the Minister of Environment and Forests, published in the Official Gazette of Romania no. 422/25.06.2012 for approval of the "Methodological norms for the formation and the use of the land improvement fund for forestry purposes". On this Order's entry into force, the old law, the Order of the Ministry of Agriculture, Forests, Waters and Environment no. 499/2003 was repealed.

By law, the sources of the fund are (Order of the Ministry of Environment and Forests 2353/2012, art. 1):

- "a) the fee for lands' permanent removal from the standing crop referred to in art. 41 paragraph (1). a) of Law no. 46/2008 - Forestry Code, as amended and supplemented;
- b) interest charged under the law, for the cash availability, and for the deposits made up of revenues earned from carrying out activities referred to in letter a)".

However, legislation mentions the fund's destination. Thus, this fund ensures (Order of the Ministry of Environment and Forests 2353/2012, art. 4):

"a) funding the research, design and execution of the works stipulated in the development, improvement and enhancement projects through forestation of degraded lands established in improvement areas;

b) the financing of technical and economic studies preparation and documentation for achieving protective forest belts;

c) the funding of land forestation for categories achievement of The Protective Forest Belts National System;

d) compensation for the income loss corresponding to the actual area occupied by forest belts, stipulated in art.101 paragraph (1) of Law no. 46/2008, with subsequent amendments".

From an accounting perspective, the improvement fund is recorded as follows:

**Table 4:** Bookkeeping the improvement fund

Operation	Correspondent accounts according to the NFD Chart of Accounts, compliant with the OMPF 3055/2009	Simultaneous bookkeeping
Counter-value of forestations on degraded land from the improvement fund	23113 = 404 TVA	/
Collection of the improvement fund from the ministry	5121 = 4722	2311=404
Works payment from the improvement fund	404=5121	404=4812 paid by the NFD
Performance guarantee	404=167	/
Consumption from the improvement fund	4722=23113	/
Budgetary allocation for ecological restoration	47511=23112	/
Extra-bookkeeping of improved lands, on the date of the final acceptance, including VAT, from own sources or from the budget	4722=23113	Final receipt on achieving the state of sturdy wood, about 10 years

Source: Adapted from *Manualul de politici contabile si proceduri de aplicare a Planului de conturi 3055/2009*, 2012, page 142.

## 5. Conclusions

The Romanian forestry special funds, governed by relevant government structures and coordinated by Romsilva National Forest Directorate, prove to be of interest to economists, as *they represent the key to a balance* between man and nature in social terms and between the forestry industry and the health ecosystem through economy. Seen as funding sources for urgent and current forestry projects, the four special funds can really achieve their purpose *when adapting the funds based on the forestry needs* in order to answer the Romanian social needs.

We want to emphasize the difference between a general matter of economics and a matter of environment. If a general matter of economics can have immediate effects that are obvious, discernible, verifiable, and in some cases an effective post-effect response, the matters of environment generally occur on medium or long periods, and the lack of concern for their effective and sustainable resolution can have disastrous and irreversible consequences for man.

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## **IFRS IN THE SMALL AND MEDIUM-SIZED ENTITIES.DIFICULTIES AND OPPORTUNITIES OF THE IFRS FOR SMES**

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**Abstract:** *Over the years, the accounting have to meet a series of transformations and adaptations to the new trend by globalization, harmonisation and integration, trying to unfold transformations carried out at European and international level. In the same way and SMEs have undergone a series of changes, moreover SMEs shall draw up financial statements often use only owner-managers or use only tax authorities or other government authorities. Financial statements elaborated only for these purposes are not necessarily financial statements general purpose.*

*IASB (International Accounting Standard Board) has developed and published a separate standard devised to apply financial statements with general purpose and other financial reporting of the small and medium-sized entities (SMEs), entities private and public entities without liability, called IFRS for SMEs (The International Financial Reporting Standard for Small and Medium-sized entities).*

*The International Financial Reporting Standard for SMEs has become an issue of wide interest and for Romania. Through the contents OMPF 3055/2009 is a harmonisation with European Directives and International Standards, fundamental purpose being upgrade the comparability of financial statements of the economic entity.*

*In an effort to reduce the workload of SMEs has been provided the fact that IFRS for SMEs should be reviewed every three years and may be implemented by any entity, whether adopted or not full set of IFRS.*

*We believe that IFRS for SMEs is different than the full set of IFRS, due simplification, which allows flexibility provisions and showing accounting required information for this class of entities, but in applying the standard simplified scheme for SMEs has revealed a series of opportunities and challenges. IFRS for SMEs allows a particular accounting policies on recognition and measurement principles, offers greater flexibility in developing their accounting rules than provisions of full IFRSs.*

*Having regard to theoretical concepts discussed above, we carry out a case study, which shows the comparable presentation by applying of financial statements OMPF 3055/2009 and IFRS for SMEs in reporting financial assistance in Romania.*

*According to studies, rules used in the preparation and presentation of financial statements present a yawning abyss regarding accounting standards and those applying them in practice, due to the existence of multiple accounting regulations, confusing and permanently changing.*

*Through this article it soughts to point out the accounting rules used by entities in Romania, in financial statements presentation.*

**Keywords:** *financial statements, standard, SMEs, IFRS for SMEs, harmonisation, performance*

### **1. Introduction**

The International Financial Reporting Standards, known as IFRS abridged, having its origin in English - International Financial Reporting Standards, shall be carried as a set of standards "based on principles" as laid down general rules, but shall require and specific accounting treatments. These are issued by the International Accounting Standards Board (IASB) in order to apply financial statements and other financial reporting entity's directed to profit, providing information regarding the position, performance and cash flows of the entity, appropriate to users in decision-making process (International Financial Reporting Standards – IFRS, Part A – Conceptual framework and provisions, 2011).

IFRS-s shall lay down the rules for the recognition, assessment, presentation and description which deals with transactions, events and conditions that are important in the financial statements with general purpose. IRFS is based on the general framework conceptually, which deals with the concepts which outlines the information given in the financial statements with general purpose. The aim being to facilitate Frame formulation and logically consistent IFRS-sized. It also provides a basis for using reasoning in solving professional accounting.

### **2. The jump SMEs to IFRS**

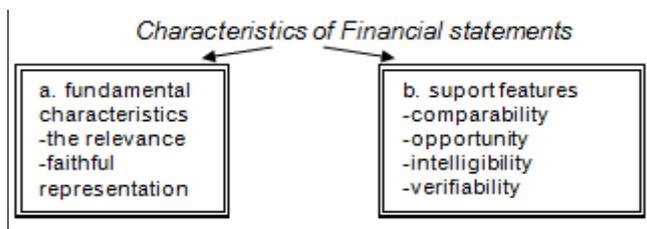
The Council for International Financial Reporting Standards Board (IASB) has published at the time of the year 2006 the project for the preparation of Financial Reporting Standards for SMEs, which was published in Romania, in 2009, by CECCAR with permission and review the Review Committee IASCF.

This standard has been developed and published by IASB having as foreground presentation by SMEs financial situations of general purpose, since SMEs shall draw up accounts only for noncommercial owners or only for noncommercial tax authorities or other governmental authorities (International Financial Reporting Standards (IFRS) for Small and Medium-sized Entities, 2009).

IFRS for SMEs is designed for use by small and medium-sized entities, falling within the following categories:

- a. do not have public accountability
- b. public financial situations general purpose for external users.

The fundamental objective of SMEs is to provide information regarding the position, performance and cash flows of the entity (Feleagă N. and Feleagă L., 2005), and giving the qualitative characteristics of financial statements, as can be seen in the figure below.



**Figure no. 1:** Characteristics of financial statements

Source: own processing

Unlike the full set of IFRSs and other national accounting standards, IFRS for SMEs is much shorter constituting a single standard in its own right, which was carried out in accordance with the requirements and the needs of SMEs which represents a percentage of 95% by number entities existing at the global level.

Full IFRS completely shows more accounting treatments, while IFRS for SMEs provides for a single treatment, that is the easiest, and it also allow the choice of a certain accounting policies on the principles of providing and assessment offering greater flexibility in the development of their own accounting rules.

Practically speaking, the IFRS for SMEs is seen as an accounting framework for entities which have no size and nor the resources required to use the full set of IFRSs.

### 3. Challenges and opportunities in applying IFRS for SMEs

In applying the standard simplified for SMEs have resulted in a series of opportunities and challenges, taking into account both financial statements and accounting policies (Caloian Florentin, 2012):

#### A. Financial statements

OMFP 3055/2009	IFRS for SMEs
<p>The legal entities who satisfy 2 criteria of the 3 listed:</p> <ul style="list-style-type: none"> <li>- Total assets ≤ 3,650,000 euro</li> <li>- Net turnover ≤ 7,300,000 euro</li> <li>- Number of employees ≤ 50</li> </ul> <p>You must submit financial statements which may include the following:</p> <ul style="list-style-type: none"> <li>- Statement of financial position</li> <li>- Profit and loss account</li> <li>- Statement changes its own capital</li> <li>- Statement cash flows</li> <li>- Explanatory notes</li> </ul> <p>The legal entities which on the date of financial statements not exceeds 2 criteria of 3 herein above, shall simplified financial statements such as the following:</p> <ul style="list-style-type: none"> <li>- Short balance sheet</li> <li>- Profit and loss account</li> <li>- Simplified notes</li> </ul> <p>* You can present the statement of changes own capital and/or statement cash flow.</p>	<p>A complete set of financial statements should include:</p> <ul style="list-style-type: none"> <li>- Statement of financial position</li> <li>- A single statement of income for the reporting period covering all the income items and expenditure which are recognized during the period</li> <li>- A statement of changes in capital</li> <li>- A statement of cash flows</li> <li>- Accounting policies and other explanatory information</li> </ul> <p>There is no format for the statement of financial position. But in the balance sheet are provided as follows:</p> <p>A. assets:</p> <ul style="list-style-type: none"> <li>- Cash and cash equivalents</li> <li>- Trade and other receivables</li> <li>- Financial assets</li> <li>- stocks</li> <li>- Tangible and intangible</li> <li>- Investment property</li> <li>- biological assets</li> <li>- Investments in associates and joint ventures</li> <li>- Deferred tax payable</li> <li>- Deferred tax assets</li> </ul> <p>B. equity and duty:</p>

<p><i>Declaration of Conformity</i> Entities must disclose in the financial statements notes that they have not been drawn up in accordance with Accounting Law 82/1991, republished and provisions of OMPF 3055/2009.</p> <p><i>Deviation from regulations</i> Annual financial statements must give a true and fair view of the assets, of liabilities, financial position, profit or loss of the entity. If application of the regulations is not sufficient to ensure an accurate picture of entity, it should present additional information in the notes.</p> <p><i>Comparative information</i> An entity must provide comparative information for one year for the amounts presented in financial statements.</p> <p><i>Materiality threshold and aggregation</i> Balance sheet and profit and loss account of elements are preceded by</p>	<ul style="list-style-type: none"> <li>- trade payables and other nature</li> <li>- Financial liabilities</li> <li>- exigible tax debts</li> <li>- Deferred tax liabilities</li> <li>- provisions</li> <li>- Equity attributable to owners of the parent</li> <li>- Controlling interests</li> </ul> <p>Other items presented in the statement of comprehensive income, such as:</p> <ul style="list-style-type: none"> <li>- income</li> <li>- The cost of financing</li> <li>- Share of profit or loss of associates</li> <li>- Tax expenses</li> <li>- Profit or loss</li> </ul> <p>Cash flow statement shows the cash flows generated and used during a specified period. The Explanatory Notes shall provide additional information of financial statements.</p> <p><i>Conformity with the IFRS for SMEs</i> An entity is accordance with IFRS for SMEs will make a recall explicit and without reservation in respect of compliance in notes.</p> <p><i>Deviation from standard</i> In extremely rare cases, when management concludes that ensure conformity IFRS for SMEs should be misleading and would be in conflict with the objective of financial statements of SMEs, the entity will drift away from that requirement, except situations where the regulation prohibits such deviation.</p> <p><i>Comparative information</i> An entity will present comparative information on previous accounting periods for the amounts shown in financial statements.</p> <p><i>Materiality threshold and the aggregation</i> An entity shall present separately each class significant of similar items.</p>
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Arabic numerals, with the presentation of details in notes.	
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B. Accounting policies

OMFP 3055/2009	IFRS for SMEs
<p><i>Definition accounting policy</i> Definition accounting policy is consistent with the definition of IFRS-SME. The method of depreciation is considered accounting policy.</p> <p><i>Selection of accounting policies</i> Directive IV EEC does not contain strict rules in this respect, except that when transactions are significant in accordance with certain criteria and internal judgment of the entity who classified this must be treated separately</p> <p><i>Accounting treatment of changes of policy</i> Policy changes may be caused by: -initiative of entity -decision of an authority A voluntary change in accounting policy can also be determined by: -changing entity exceptional situation or economic conditions in which they operate -to need to obtain more relevant and credible information.</p> <p><i>Error correction periods prior</i> Errors are periods prior restated retrospectively. Restatement of comparative information balance sheet and profit and loss account is expressly prohibited. Insignificant errors can be attributed to the profit and loss account.</p>	<p><i>Definition accounting policy</i> Accounting policies are the principles, the bottoms, like conventions, rules and practices applied by an entity which prepares and presents financial statements.</p> <p><i>Selection of accounting policies and other guidance hierarchy</i> To select an accounts when IFRS-SMEs does not treat specifically a transaction, an event or a condition, management will be with a view to applying sources: -requirements and guidelines IFRS - SMEs for similar things -definitions, recognition criteria and a basis for the assessment of assets, liabilities, income and expenditure -general principles.</p> <p><i>Accounting treatment of changes in policy</i> Changing an accounting policy is booked as follows: -an entity must account for a change an accounting policies resulting from a change of IFRS-SMEs -when an entity has chosen to apply IAS 39 - Financial instruments: recognition and measurement, inseed of the requirements IFRS-SMEs for financial instruments -other changes in accounting policies are accounted retrospectively.</p> <p><i>Error correction periods prior</i> Significant errors in previous periods are corrected retrospectively, except situations when the determination of error is impossible.</p>

When correcting the error causes a loss carried forward, it must be covered before any distributions.

Source: processing after CECCAR

#### 4. Case Study

Having regard to theoretical concepts discussed above, we will carry out a case study, which shows comparability of preparation and presentation of financial statements by applying OMPF 3055/2009 and the IFRS for SMEs, financial reporting entity in Romania.

##### A. Applying OMPF 3055/2009

Case study has been carried out at SC Radiant Glass SRL, has as their main activity and trimming processing flat glass.

The entity shall draw up balance sheet and profit and loss account and explanatory notes, submitted in accordance with Accounting Law no.82/1991 reissued and with the regulations in accordance with Directive IV EEC, approved by OMPF 3055/2009. In table no. 1 shows the main elements of the financial statements ([www.mfinante.ro](http://www.mfinante.ro)):

**Table no.1:** Financial statements according OMFP 3055/2009

<b>Balance sheet elements (RON)</b>	<b>31.12.2010</b>	<b>31.12.2011</b>
<b>Fixed assets-total</b>	<b>30575</b>	<b>30575</b>
<b>Current assets-total, of which:</b>	<b>936937</b>	<b>947252</b>
Stocks	689538	764561
Claims	137955	162660
Cash and bank accounts	109444	20031
<b>Expenditure in advance</b>	<b>-</b>	<b>-</b>
<b>Total debts</b>	<b>970725</b>	<b>982045</b>
<b>Incomes in advance</b>	<b>-</b>	<b>-</b>
<b>Provisions</b>	<b>-</b>	<b>-</b>
<b>Capital-total, of which:</b>	<b>-3213</b>	<b>-4218</b>

<i>Paid-up share capital</i>	200	200
<i>Special assets regia</i>	-	-
<i>Public property</i>	-	-
<b>Profit and profit and loss account (RON)</b>	<b>31.12.2010</b>	<b>31.12.2011</b>
Net turnover	325508	441283
<b>Total income</b>	<b>337412</b>	<b>471584</b>
<b>Total expenditure</b>	<b>322313</b>	<b>472589</b>
Gross profit or loss		
-profit	15099	0
-loss	0	1005
Profit or loss of financial year		
-profit	10224	0
-loss	0	1005

Source: own processing

Financial statements of the above is the source of the basic information to carry out the analysis financial. They are formal reports on the state and financial performance of entity in presenting an image of financial position and its profitability at the end of a period of the current financial year.

### **B.Application of IFRS for SMEs - Presentation of Financial Statements**

Case study has been carried out on the example BEAUTY DENT SRL, which is providing services in the field of dental technique.

Since its establishment till now the company has diversified and expanded the range of products and services. The Laboratory with European standards and has a team of experienced technicians who are able to please the most exacting demands, using materials and tools of-the-art and supplies disposable.

On the basis accounting entity shall draw up the balance sheet and profit and loss account and the rest of the reports, which are presented in accordance with Accounting Law no.82/1991 reissued and with International Accounting Standards. Taking into consideration that in the *IAS 1 - Presentation of financial statements* is not given any form of balance sheet and profit and loss account, the entity can create their own format so that the information presented fulfills all accounting information requirements.

In table no. 2 shows the main elements of financial statements ([www.mfinante.ro](http://www.mfinante.ro)):

**Table no.2:** Financial statements according IAS 1:

<b>Balance sheet elements (RON)</b>	<b>31.12.2010</b>	<b>31.12.2011</b>	<b>Variation (%)</b>
Intangible fixed assets	0	0	-
Tangible fixed assets	81015	88466	9,19
Financial fixed assets	0	0	-
<b>Fixed assets - total</b>	<b>81015</b>	<b>88466</b>	<b>9,19</b>
Stocks	10267	0	-100
Claims	0	0	-

Short-term investments	0	0	-
Cash and bank accounts	260	1905	632,69
<b>Current assets- total</b>	<b>10527</b>	<b>1905</b>	<b>-81,90</b>
<b>Total assets</b>	<b>91542</b>	<b>90371</b>	<b>-1,28</b>
<b>Shorts-term debts</b>	<b>75224</b>	<b>72824</b>	<b>-3,19</b>
<b>Long-term debts</b>	<b>0</b>	<b>0</b>	<b>-</b>
<b>Provisions</b>	<b>0</b>	<b>0</b>	<b>-</b>
<b>Equity capital, of which:</b>	<b>16318</b>	<b>17547</b>	<b>7,53</b>
Social capital	200	200	0
Share premium	0	0	-
Revaluation reserve	0	0	-
Total reserves	0	0	-
Result for the year	1341	1229	-8,35
<b>Total liabilities</b>	<b>91542</b>	<b>90371</b>	<b>-1,28</b>
<b>Profit and profit and loss account (RON)</b>	<b>31.12.2010</b>	<b>31.12.2011</b>	<b>Variation (%)</b>
Operating income, of which:	98936	96905	-2,05
<i>Turnover</i>	98936	96905	-2,05
Financial income	1	1	0
Extraordinary income	0	0	-
<b>Total income</b>	<b>98937</b>	<b>96906</b>	<b>-2,05</b>
Expenditure on the holding, of which:	81526	65789	-19,30
<i>Material costs</i>	32004	37890	18,39
<i>Staff costs</i>	19200	17230	-10,26
<i>Amortization expenses</i>	18492	10669	-42,30
<i>Expenditure on those provisions</i>	0	0	-
Financial expenses	12845	29654	130,87
Extraordinary expenses	0	0	-
<b>Total expenses</b>	<b>94371</b>	<b>95443</b>	<b>1,13</b>
<b>Operating result</b>	<b>17410</b>	<b>31115</b>	<b>78,71</b>
<b>Financial result</b>	<b>-12844</b>	<b>-29653</b>	<b>-13,08</b>
<b>Extraordinary result</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Gross result</b>	<b>4566</b>	<b>1463</b>	<b>-67,79</b>
<b>Income taxes</b>	<b>3225</b>	<b>234</b>	<b>-92,74</b>
<b>Net result</b>	<b>1341</b>	<b>1229</b>	<b>-8,35</b>

Source: own processing

By balance sheet is should be noted that the entity complies with International Accounting Standards and Regulations Directive -IV- EEC, with respect to the allocation of assets and liabilities. The profit and loss account is reflected the company performance and presents a distinct structure of the financial statements by processing and systematization all revenue and expenditure recorded in current financial year.

International Accounting Standards leave a large freedom of thought accounting officer, in such a way that professional reasoning decisions the best, for the financial statements present a true and fair view of business performance.

## **5. Conclusions**

In the case of Romania accounting reform in the field has been influenced by the perimeter of European and international developments in the area. The tendency was, to provide a framework for the elaboration and presentation of comparable financial statements both with European Accounting Directives and with IFRS. This approach is wants to contribute to improving the comparability of financial statements of entity in Romania. So IASB has carried out a specific simplified standard for small and medium sized entities (IFRS for SMEs), coming in their support in carrying out and presenting financial statements general purpose.

In our country has not been imposed a bill to determine this standard, but by OMFP 3055/2009 has occurs the harmonization of national rules with EU directives and international standards, with a view to presenting annual financial statements.

Information to be provided by annual financial statements on the basis of analysis financial. Financial statements must be drawn up in such a way as to provide information about the position and financial performance, as well as the accurate entity. Each of the component of the financial statements shows different information about same transactions and events carried out by economic entity during the course of a financial year. Therefore, each financial situation analyzed separately is unable to provide an overall picture of the entity by analyzed.

Accounting system IAS/IFRS applied to certain operators in Romania since 2000 and there is an intended to gradually generalize these international standards, so that they can be applied and in the smallest entity. However, it is an unwieldy system, with more than one accounting records, calculations more complicated and different results from accounting system governed by legislation presented, so that there is a certain inertia, to the disadvantage of applying IAS/IFRS.

Some experts consider that many of the companies, by a number of different accounting tricks have concluded the year with profit, in order to be able to access bank loans. These entities will collapse as soon as the implementation of the standards. Such a situation will create additional problems entities preserve, because they will have to apply new accounting standards at a time when that will be affected by competition in the common market predatory european. The only chance to overcome such difficulties is that all economic agents to record profit real up to application of the new accounting system, since, in the case where the profit is artificially created by application of the new standards, the companies are likely to become bankrupt.

In the markets with a competitive level on the rise, the application allows an entities IFRS relate to other similar entities at world level and to enable investors and other users looking to compare company performance with competitors on a global level.

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# THE PATTERNS OF EU STOCK MARKETS. IS THERE A SIGN OF CONVERGENCE?

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**Abstract:** *This paper offers a preliminary analysis regarding the convergence of European stock markets. The sample consists of all 27 countries of European Union split in seven sub-groups related to income level, euro adoption and development level. The patterns analysed through this article are an important indication of expected convergence in EU stock markets. This study analyses the evolution and the trend of market capitalization and stocks traded and their correlation with some important determinants, namely inflation, capital formation, enrolment years, trade, FDI, government debt. Results show a negative correlation between initial level of market capitalisation and its growth rate and also of initial level of stocks traded and its growth rate. These results could be a sign of absolute convergence. Further research in this area is needed to see if there exists conditional convergence when heterogeneity among individuals is controlled for.*

**Keywords:** market capitalization, stocks traded, convergence, stock markets, EU

**JEL classification:** G15, G30

## 1. Introduction

By this study, we offer a preliminary analysis of patterns of the stock markets in European countries. We base our analysis on 27 EU countries which are split in sub-groups based on their income-level and Euro adoption. We have 7 sub-groups of countries: high income, upper middle income, euro and non-euro countries, developed, developing and emerging countries. The convergence model is usually applied for economic growth but, recently has been applied to stock markets as well (Narayan et al., 2011).

The introduction of a global capital market, if technologies are the same, would speed up the convergence for domestic product but would slow down the convergence for personal income according to Barro and Sala-i-Martin (1992). Still, some authors (Allen et al., 2006; Soto, 2003) suggest that countries which receive greater private capital flows have also grown faster due to the development of financial structure in response to the real economy.

Convergence in European Union has been the centre of many analyses for many researchers, which have divided in several areas like: monetary convergence (Orlowski, 2005, Mylonidis and Kollias, 2010), convergence on macroeconomic variables (Brada et al., 2005) and recently in convergence of stock markets (Narayan et al., 2011). The studies present Germany and France with the higher degree of convergence in euro zone (Mylonidis and Kollias, 2010) and Czech Republic as the best to obtain price stability (Orlowski, 2005) from the emerging countries. Still, Mylonidis and Kollias (2010) report that the process of convergence is still on-going.

In theory, European Monetary Union is considered a good example of convergence because it led to a single currency, a single central bank, and a single monetary policy (Narayan et al., 2011). Still there are more realistic researcher (Kim et al., 2005) which consider that effectiveness of different economic convergence criteria associated with European Monetary Union differs across member states. Also, Mylonidis and Kollias (2010) support that the introduction of the euro optimizes European economic integration and follows convergence process that is taken place from over two decades (Kim et al., 2005).

In this context we consider that an in-depth analysis of market capitalization and stock traded in the process of convergence in European stock markets is of greater importance. Not many studies have analysed the patterns of these indicators on European stock market in the context of convergence or have treated the relationship between market capitalization and stocks traded and different variables. This paper tries to address this gap and investigate possible channels through which EU countries could converge completely.

The patterns which are analysed through this article are an important indication regarding the expected convergence within European stock markets.

The objective of this paper is to offer a preliminary view on the relationship between variables, by calculus and graphical representation.

The paper is organized as follow: section 2 provides a brief view on literature review on convergence hypothesis and stock markets convergence, section 3 describes the data, section 4 presents the relationship between stock market indicators and growth of stock markets and section 5 concludes.

## **2. Theoretical literature review**

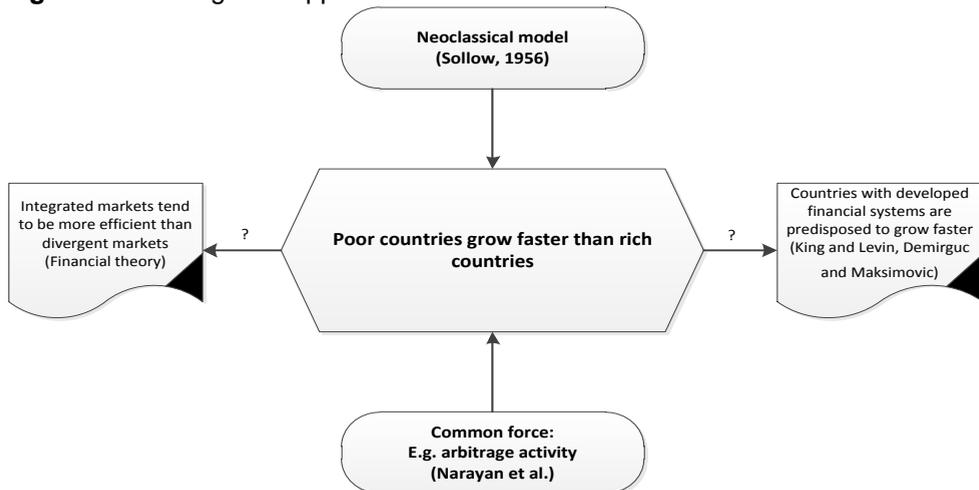
Convergence hypothesis is usually applied to economic growth and has been inspired by Baumol (1986). This theory regard specially if low growth countries converge to high economic growth and the speed of convergence (see Barro, 1991; Barro and Sala-i-Martin, 1992).

Specifically, Barro and Sala-i-Martin (1992) are asking if poor countries or regions tend to grow faster than rich ones, and what are the forces that could lead to convergence over time particularly in the levels of per capita income and product. Narayan et al. (2011) also support that there is a common force that make a market converge to another market such as arbitrage activity, that bring markets together. Barro and Sala-i-Martin (1992) study the convergence across the 48 contiguous U.S. states. They exploit data on personal income since 1840 and on gross domestic product (of each state) since 1963. This involves keeping constant school enrolment rates and ratio of government consumption to GDP. The empirical results for the U.S. states indicate that the speed of convergence for output is only slightly faster than that for personal income.

Neoclassical growth models, such as Sollow (1956), Cass (1965) and Koopmans (1965) describe this as the pattern where a country's per capita growth rates tends to be inversely related to its starting level of income per person. Providing that countries have similar preferences and technology, poor countries tend to grow faster than rich countries. So, there is a force that encourages convergence in levels of per capita income across countries (Barro, 1991). Barro (1991)'s results support the convergence hypothesis in a study of 98 countries between 1960-1985. So, for a given quantity of human capital, a poor country will grow faster than a rich country.

But King and Levine (1993 a), b)), Demirguc and Maksimovic (1996) argue that countries which have better developed financial systems, especially efficient banks and stock markets, are predisposed to grow faster because they provide access to much funds necessary to constrained economic enterprises. Financial theory considers that integrated markets tend to be relatively more efficient than divergent markets (see Narayan et al., 2011). Convergence also involves that markets are integrated. Thus level of financial development of countries seems to be a central factor underlying conditional convergence, according to past studies results (Fung, 2009).

**Figure 1.** Convergence approaches



Source: Accomplished by author following Solow (1956), Narayan et al.(2010), King and Levine (1993), Demirguc and Maksimovic (1996).

Convergence can be absolute and conditional. Absolute convergence of financial markets is taking place when countries share the same fundamental characteristics regarding financial markets. The only difference across countries is its initial level of financial market development (Narayan et al., 2011).

The conditional convergence takes place when financial markets across countries differ in terms of factors relating to the performance of their financial markets.

Recently, this theory has been applied to financial markets see, inter alia: Brada et al. (2005), Su et al. (2010), Orlowski (2005), Elyasiani et al. (2007), Narayan et al. (2011), Fung (2009) and Mylonidis and Kollias (2010).

The reasons for applying the theory of convergence on financial markets are based on the literature on stock market interdependence and portfolio diversification according to Narayan et al. (2011).

Narayan et al. (2011) focus their research on convergence of stock market for 120 countries covering the period 1985-2008. Convergence of stock markets is proxied by stocks traded and market capitalization. Dataset used is a balanced panel with an annual time component. Due to the large number of countries, they used 11 different panels based on the following criteria: high income, middle income, low

income, OECD, CSI and developing countries. Their analysis is carried also at a regional level. The main finding is that, based on the conditional convergence model, convergence of market capitalization and stocks traded is found for 4 panels. These are high and low income panels, the OECD panel, and the Sub-Saharan African panel. The speed of convergence is high, in most of the cases it is depicted between 20% and 30%.

Mylonidis and Kollias (2010) carry a research work on convergence on European stock markets in the first euro-decade. These are the major stock markets namely Germany, France, Spain and Italy, the largest and most developed markets in the euro area (Kim et al., 2005). The dominant position of Germany within the euro zone seems to be (re)affirmed by tests conducted herein. These criteria included convergence in long term interest rates, inflation rates, as well as, in the fiscal position of prospective eurozone members. The study examines the time-varying long-run relationship in the post-euro era using daily data from January 4, 1999 to July 23, 2009, transformed in logarithms. In general, the empirical results suggest that although some convergence has been taking place over time, it is still in the process of being achieved.

The differences between these studies is that Narayan et al., (2011) take into consideration 120 countries from the worldwide and Mylonidis and Kollias, (2010) study four European stock markets. Still, the results are somehow similar, Narayan et al. (2011) show a high degree in convergence in high income countries while Mylonidis and Kollias (2010) remark that the most developed countries are having the highest degree of convergence.

Monetary convergence, especially in European countries represent another research part of the convergence literature. In this context, Orlowski (2005) develops a monetary policy framework necessary in implementation of monetary convergence in Eurozone for EU accession countries. This is based on direct inflation targeting. This model is possible only for countries with developed financial markets (Mishkin, 2000), excluded for smaller accession states. So, countries which are subject of this study are: Poland, Hungary and Czech Republic, the larger accession countries which have adopted DIT policies. The analysis implies that the monetary convergence begins with flexible inflation targeting and concludes with a full-fledged euroization using ordinary least squares (OLS). The theoretical framework suggests adopting flexible DIT policies for monetary convergence to the eurozone. Czech Republic seems to be the best performer within the examined group to obtain price stability.

Another study that completes the research on European stock market is Brada J.C. et al. (2005) who estimate the convergence of macroeconomic variables using the rolling cointegration between financial and real macroeconomic aggregates of the European Union (EU). They examine three groups of countries: benchmarks of EU performance, recently members of EU and first round candidates. The sample period for the recent EU members generally covers the 1980-2001 period while for the rest of the countries the data begin in early 1990s and run through 2000 or 2001. For all estimations are used monthly data. The results show there is no systematic difference in the cointegration pattern of the EU members who joined in the 1990s and those who joined in the earlier expansion of the EU. The countries that recently joined the EU exhibit time-varying cointegration with the reference countries over much of the 1980-2000 sample period.

Other authors which have studied convergence across different variables or institution in stock markets are: Elyasiani et al. (2007), Fung (2009), Choong et al. (2010), Chordia et al. (2005) and Kumar (2010). Elyasiani et al. (2007) results` support the existence of convergence across different financial institution. They examine risk and return linkages in US commercial banks, securities firms and life insurance companies between 1991 and 2001. The main finding is that large financial institutions exhibit much larger volatility spillovers than smaller institutions. The results also confirm the presence of a higher level of convergence between banks and brokerages and tighter link in risk among large financial institutions. Also, Fung (2009) tests for convergence in financial development and economic growth by incorporating the interaction between the real and financial sectors into an otherwise traditional test for convergence. The sample consists in 57 countries running from 1967-2001. Results support the existence of conditional convergence among countries in economic growth and financial development, but only for high and middle income subsamples. Choong et al. (2010) focus on the role of stock markets as a channel through which foreign capital flows could promote growth. The findings reveal that FDI exhibits a positive impact on growth, while both foreign debt and portfolio investment have a negative impact on growth in all sample countries. However, results indicate that stock markets might be a significant channel through which capital flows affect economic growth. The sample is formed of 51 countries with different growth experiences (32 developing and 19 developed) and contains various categories of foreign capital flows from 1988 to 2002. Chordia et al. (2005) study individual actions following how market converge to efficiency based on the data of large NYSE firms. They indicate that efficiency does not happen immediately. But Kumar N. (2010) uses the growth model in order to capture the trends and patterns of market capital, domestic saving, GDP growth in Indian context. He also investigates the relationship between market capitalization, saving and GDP growth over the last three decades or so. Time series data for the study is considered for the period 1983-2007. The results indicate further growth of market capitalization and positive association between macro indicators. It supports the hypothesis that Indian stock market is emerging and has opportunity to attract investors from overseas.

### **3. Data description**

The sample consists of all 27 countries from European Union. We have classified these countries by their level of development, income level and euro adoption. These allowed us to disaggregate the data into seven panels: high income and middle income, developed, emerging and developed countries, euro and non-euro countries. The country classification based on their income level is defined by World Development Bank and country classification based on their level of development is made according with Dow Jones Indexes classification. This classification begins with analysts' examination of countries based on three broad categories of metrics for each country: Market & Regulatory Structure, Trading Environment, and Operational Efficiency. Euro area delimitation is taken from Eurostat.

**Table 1.** Country classification

Income level		Development			Euro area	
<i>High income</i>	<i>Middle income</i>	<i>Developed</i>	<i>Emerging</i>	<i>Developing/ Frontier</i>	<i>Euro</i>	<i>Non-euro</i>
Austria	Bulgaria	Austria	Czech	Bulgaria	Austria	Bulgaria
Belgium	Latvia	Belgium	Republic	Cyprus	Belgium	Czech
Czech	Lithuania	Denmark	Hungary	Estonia	Cyprus	Republic
Republic	Romania	Finland	Poland	Latvia	Estonia	Denmark
Cyprus		France		Lithuania	Finland	Latvia
Denmark		Germany		Malta	France	Lithuania
Estonia		Greece		Romania	Germany	United
Finland		Ireland		Slovak	Greece	Kingdom
France		Italy		Republic	Ireland	Poland
Germany		Luxembourg		Slovenia	Italy	Romania
Greece		Netherlands			Luxembourg	Sweden
Ireland		Portugal			Malta	Hungary
Italy		Spain			Netherlands	
Luxembourg		Sweden			Portugal	
Malta		United			Slovak	
United		Kingdom			Republic	
Kingdom					Slovenia	
Netherlands					Spain	
Poland						
Portugal						
Slovak						
Republic						
Slovenia						
Spain						
Sweden						
Hungary						

Source: Accomplished by author in order with Dow Jones and World Bank Classification

The data is represented by two market indicators namely market capitalization and stocks traded and by various macroeconomic variables and national accounts data with annual frequency. In our determination we use the following explanatory variables: inflation, capital formation, primary and secondary enrolment years, interest rate spread, domestic credit provided by the banking sector, domestic credit provided by the private sector, trade (exports plus imports), foreign direct investment and government debt. All these variables are in percentage of GDP form. The choice of the variables is based on the theoretical reasons we found in the literature.

**Table 2.** Variables

Description	Definition	Source
<b>Inflation</b>	- annually standard deviation calculated of consumer index price.	Eurostat
<b>Capital formation</b>	- gross domestic fixed investment - in literature capital formation is generally associated to economic and also have positive effect on market capitalization by facilitating faster rate of growth (see Kumar, 2010).	World Bank
<b>Primary and secondary enrollment years</b>	- the number of years of full-time equivalent duration in primary and secondary education in the school system	World Bank
<b>Interest rate spread</b>	- the interest rate charged by banks on loans to private sector customers minus the interest rate paid by	World Bank

Description	Definition	Source
	commercial or similar banks for demand, time, or savings deposits.	
<b>Domestic credit provided by the private sector</b>	- credits allocated to the private sector	World Bank
<b>Domestic credit provided by the banking sector</b>	- includes all credit to various sectors on a gross basis, with the exception of credit to the central government, which is net.	World Bank
<b>Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.</b>	- is the sum of exports and imports of goods and services measured as a share of gross domestic product.	World Bank
<b>Government debt</b>	- is the entire stock of direct government fixed-term contractual obligations to others outstanding on a particular date. It includes domestic and foreign liabilities such as currency and money deposits, securities other than shares, and loans	World Bank
<b>Foreign direct investment</b>	- are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments.	World Bank

Source: Accomplished by author based on World Bank definitions

The credits allocated to the private sector are considered a measure of financial development in Fung (2009) study about convergence of financial development and economic growth. Credits allocated to the private sector are credits issued by both depository and non-depository institutions, which excludes those allocated to the public sector because those allocated to the private sector normally yield higher returns and are more likely to reflect fluctuations in the level of intermediated finance (Xu, 2000).

Narayan et al. (2011) use similar variables with us except government debt. At this stage we carry just a descriptive analysis and depict some correlations of these variables with the market capitalisation.

Stock markets indicators are market capitalization of listed companies and stocks traded. These measures were used by Narayan et al. (2011) and Choong et al. (2010) who have taken them as percentages in GDP.

The market capitalization measures market size as the ratio of market capitalization to GDP, and stocks traded measure stock market liquidity. Total stock value traded measures market liquidity and is defined as the product of share price and the number of shares traded. As an indicator of stock market development, it not only reflects stock market liquidity, but also its interaction with market size. For this reason, Choong et al. (2010) consider that trading value may be considered a better indicator of stock market growth than market capitalization ratio alone. Also, trading value complements market capitalization because a market may be large, but have little trading. Taken together, market capitalization and trading value provide more information about a nation's stock market than using only a single indicator (Choong et al., 2010)

Market capitalization is considered the biggest macro indicator for doing a country analysis which is defined as the value of listed shares divided by GDP and it is a measure of the size of stock markets relative to the economy (Kumar, 2010). The author, however, states that market capitalization is not an universal indicator of predicting economic performance but has a positive effect of financial development on economic growth (Kumar, 2010).

#### 4. Common patterns of stock market convergence in EU

Table 3a contains some descriptive statistics namely mean, standard deviation, coefficient of variation, skewness and kurtosis for market capitalization. The results are reported for seven panels namely high income, middle income, developed, emerging, developing, euro and non-euro countries. We notice that the mean is highest in developed countries followed by high income countries and the lowest is for developing countries. A comparative analysis of the mean reveals that the mean of market capitalization in developed countries is 88 times the mean for developing countries and 11 times the mean for emerging countries. Also, the mean for high income countries is 48 times the mean of middle income countries. Still, euro and non-euro panels seem to have similar means. The coefficient of variation suggests that volatility is highest for high income countries. Narayan et al. (2011) report a contrary situation for their panel of 120 countries. Regarding the level of development we find the highest volatility for developed countries which also have the highest mean. Skewness reports for all panels an asymmetrical distribution with most values concentrated on left of the mean, with extreme values to the right. Kurtosis show for all panels a leptokurtic distribution sharper than a normal distribution with values concentrated around the mean.

**Table 3.** Descriptive statistics of market capitalization<sup>13</sup> (mil.\$) during 2001-2011

Panels	Mean	Std. Deviation	Coeff. variation	Skewness	Kurtosis
<b>High Income</b>	41900000	70800000	1.69	2.51	9.47
<b>Middle income</b>	859000	1030000	1.20	1.84	5.76
<b>Developed</b>	63000000	80100000	1.27	1.92	6.43
<b>Emerging</b>	5660000	5180000	0.92	1.59	4.57
<b>Developing</b>	713000	811000	1.14	2.45	9.15
<b>Euro</b>	36000000	53900000	1.50	1.94	6.49
<b>Non-euro</b>	35600000	85000000	2.39	2.84	9.88

Source: Own author's computations based on data

Next we consider the same summary statistic for stocks traded (see table 4). The mean results here show similar results with those of market capitalization. The highest mean is for high income countries and developed countries. Euro group presents comparable results with non-euro group similar with market capitalization. In terms of volatility of stocks traded high income countries experience the highest

<sup>13</sup> Market capitalization (also known as market value) is the share price times the number of shares outstanding. Listed domestic companies are the domestically incorporated companies listed on the country's stock exchanges at the end of the year

volatility. In fact, developed countries have the highest volatility and emerging countries have the lowest volatility in developments panels. Non-euro countries also supports the highest volatility. Skewness and kurtosis values suggest similar interpretations with those from market capitalization.

**Table 4.** Descriptive statistics of stocks traded<sup>14</sup> (mil.\$) during 2001-2011

<b>Panels</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Coeff. variation</b>	<b>skewness</b>	<b>kurtosis</b>
<b>High Income</b>	53300000	111000000	2.08	4.27	29.90
<b>Middle income</b>	108000	167000	1.55	2.44	9.19
<b>Developed</b>	81100000	129000000	1.60	3.54	21.71
<b>Emerging</b>	2990000	2460000	0.82	1.11	3.43
<b>Developing</b>	92800	137000	1.48	2.70	11.36
<b>Euro</b>	44200000	4600000	1.69	2.07	7.03
<b>Non-euro</b>	47400000	141000000	2.98	4.47	26.41

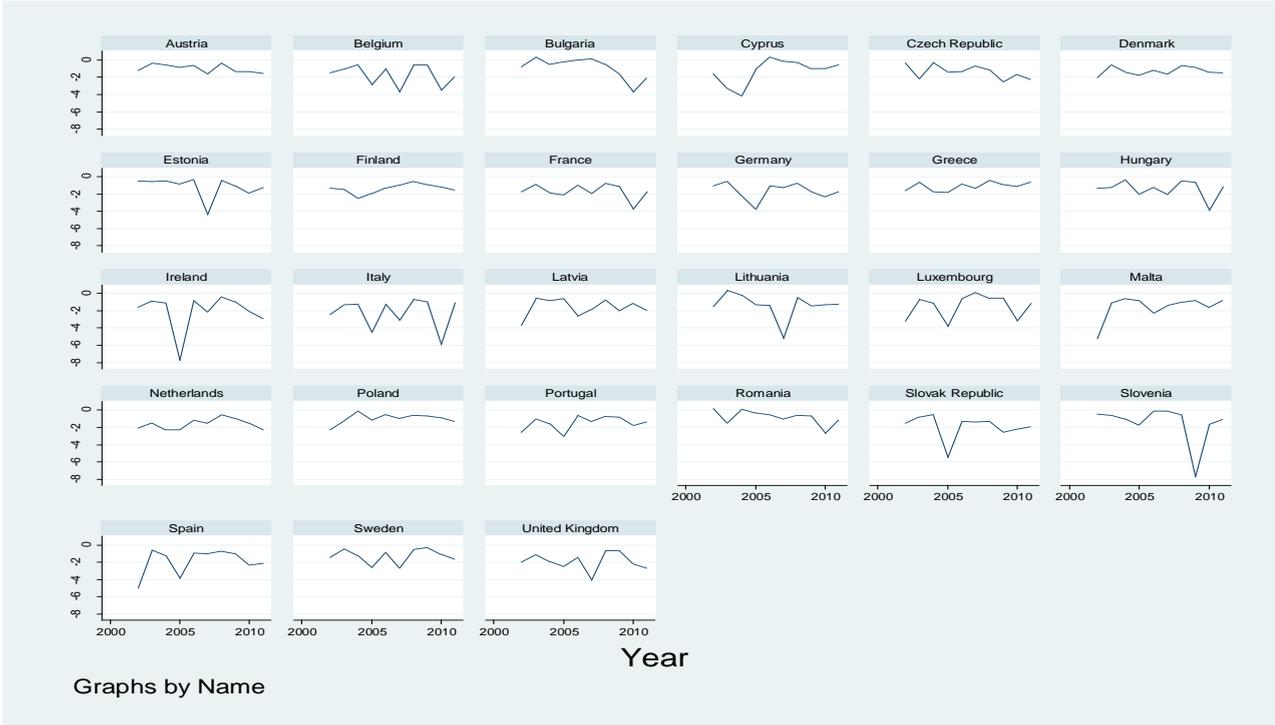
Source: Own author's computations based on data

The evolution of market capitalization growth rate between 2001-2011 can be followed in figure 2. It can be seen a decrease in the majority of the cases between 2008-2009 which was followed by a recovery starting with 2010. Interesting pattern records Poland which hasn't followed the evolution of the others countries and hasn't registered a slowdown during financial crisis. Poland even doubled the number of listed companies from 2008 to 2011 and its turnover value has started to increase recently. Overall stocks traded depicts the same trend as market capitalization. Several countries began to recover starting with the year 2011 including Germany, Italy, Finland, Austria and Poland.

In this analysis we could follow and test the convergence hypothesis which states that economies with lower initial levels of market capitalization per capita will tend to grow faster than the others (Solow, 1956). This type of convergence is named conditional convergence.

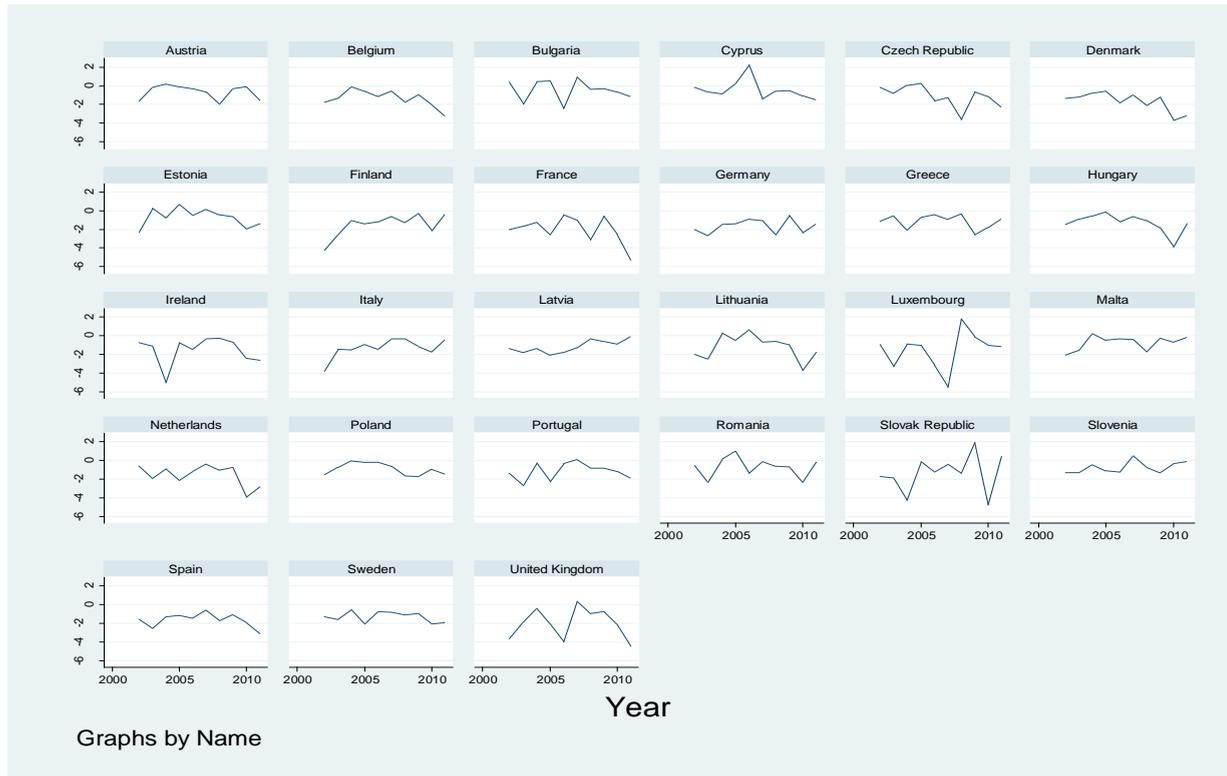
<sup>14</sup> Stocks traded refer to the total value of shares traded during the period.

Figure 2: Market capitalization growth rate (log) during 2001-2011



Source: Author's calculations based on World Bank Data

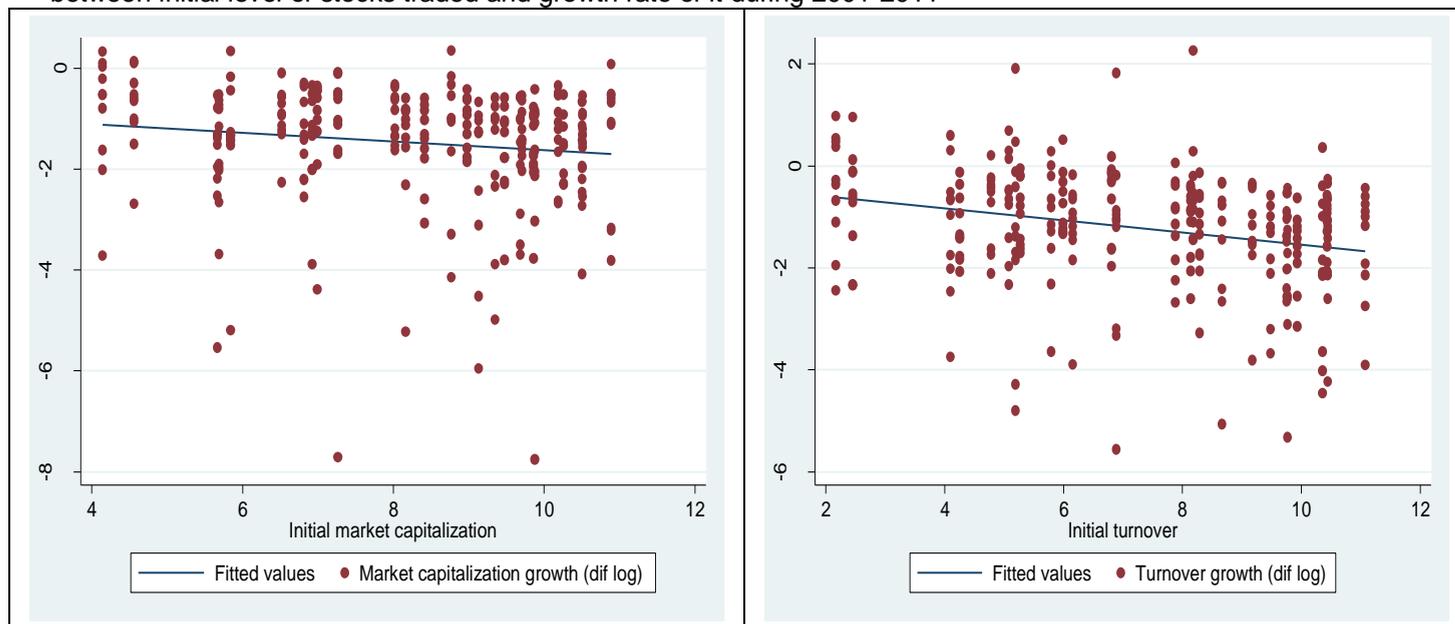
**Figure 3: Stocks traded growth rate (log) during 2001-2011**



Source: Author's calculations based on World Bank Data

In the next figure we represent a negative relationship between the growth rate of market capitalization and turnover and the initial level of market capitalization and stocks traded per capita. Based on these results we can confirm that the convergence hypothesis seems to verify in these countries. These results show that the countries with the lowest level of market capitalization or stocks traded per capita tend to grow faster than the countries with the highest values.

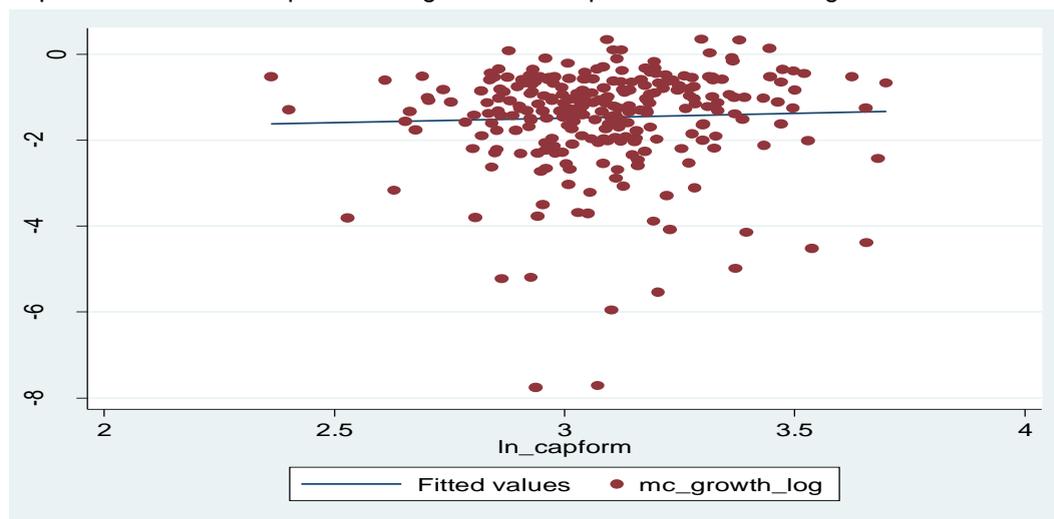
**Figure 4:** Correlation between the initial level of market capitalization and growth rate of market capitalization and correlation between initial level of stocks traded and growth rate of it during 2001-2011



Source: Author's calculations based on World Bank Data

## Relationship between macroeconomic variables and market capitalization/stock trade growth

**Figure 5.** Relationship between market capitalization growth and capital formation during 2001-2011



Source: Author's calculations based on World Bank and ICRG Data

In the above figure we represent a linear relationship between capital formation and market capitalization growth. We observe a positive correlation between market capitalization and capital formation during the considered period. The higher is the level of capital formation, the lowest is market capitalization in these countries. The same results are available for stock traded.

In this paper we intended to do a preliminary analysis for determinants of market capitalization and stocks traded. The theoretical literature offers us enough reasons to believe that these determinants could enhance market capitalization and stocks traded. For the 27 European countries, we checked as initial steps only the convergence hypothesis. At this stage we only looked at the correlations. For further research, we intend to employ dynamic panel methodology. An OLS estimation has been carried. A positive correlation was noticed between market capitalization growth and interest rate, government debt, trade, private credit. Also, were observed negative correlations with primary and secondary years. Still, no significant results were depicted when OLS estimation was carried. Since OLS is a biased and inconsistent estimator for our case (Barro and Sala-i-Martin, 1992) because the lagged values of variables we intend to use are endogenous and the lagged dependent variable will be correlated with the composed error term (Narayan et al., 2011), we intend in a future work to improve the methodology by controlling for differences between the countries and including dynamics for market capitalisation variable.

## **5. Conclusions**

In this paper we presented a pattern of the EU countries regarding their stock market determinants such as market capitalization and stock traded. When splitting the countries in sub-groups, we noticed that the indicators records larger values in developed and high income countries from developing and middle income countries. Still, countries from euro area present similar results with countries from non-euro area.

We depicted a negative correlation between initial level of market capitalisation and its growth rate and also of initial level of stocks traded and its growth rate. By depicting these results, we can state that in these countries there is a sign of absolute convergence. Further work is needed in the area to test for conditional convergence by using appropriate estimators that would control for heterogeneity among countries and endogeneity. As policy recommendation, the countries with low initial of market capitalisation and low initial value of stocks traded should enhance their market capitalisation by new financing opportunities offered by stocks for the firms, due to low transaction costs. As absolute convergence could be depicted in terms of deterministic calculus, gaps could be reduced between European countries (between middle income and developed for example) if for the middle and low income countries market capitalisation and value of stocks traded would increase.

The study of these patterns has revealed interesting findings. Expected relationships between market capitalization/stocks traded and market growth were confirmed by the results.

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## THE COMMUNICATION PROCESS OF THE FINANCIAL REPORTING

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**Abstract:** *An information has value through the financial reporting. Such are taken into account factors such as: the nature of the event referred to financial reporting, the adequacy of the presentation, the credibility and integrity of information, readability necessary to allow some conclusions on a reasonable impact on the financial statements, the investors risk profile and processing skills recovery opportunities. Communication is not an end in itself. Its existence can not be conceived outside support a general policy orientated goals undertaken by the organization. In this situation, organization and communication should be viewed as complementary tools and not as independent techniques.*

*In the communication process, it must be designed in such a way as to contribute to the objectives of the entity. Communication is managed in accordance with the overall strategic plan of the specific activity of that entity.*

*The financial communication tools are: accounting information and financial information. We can say that for accounting and its environment is interested accounting information and for financial analysis is interested financial information conducted with the help of financial indicators.*

*In determining values for financial reporting information, should be considered category of users whom it is addressed as well as the purpose for which the information is used.*

*Entering barriers to effective communication, due to lack of a common reference system or a difference in experience between the entity and its external environment leads to failure.*

*This article aims to answer the question to what extent the current contents of financial reports for these factors and provide useful information to users.*

*To demonstrate the communication within an entity will present research conducted for 4 business entity of 4 different counties*

*Communication is not an end in itself. Its existence can not be conceived outside support a general policy orientated goals undertaken by the organization. In this situation, organization and communication should be viewed as complementary tools and not as independent techniques.*

*The conclusion is that the way in which financial information is transmitted by the annual financial statements depends not only on the quantity or quality of the information but also on the way we effectively communicate with all that it involves.*

**Keywords:** *communication; financial reporting; entity; accounting regulations; informations; financial statements.*

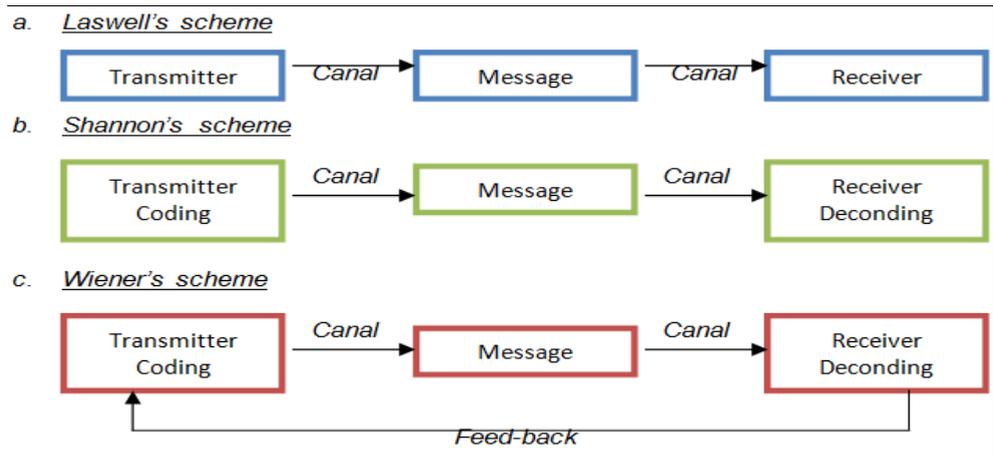
**JEL classification:** *M 41*

## 1. Introduction

Communication is defined - by most specialists - as a set of actions that share the transmission of information in the form of messages, signs, news or written texts, etc. between transmitter and receiver by means of a channel. This term is related to our existence as human beings, then as a society, because human beings and communication are interdependent.

Along the existence, mankind has progressed by improving the communication.

(Figure no. 1)



**Figure no. 1 – The communication progress**

**Source:** own processing

In other words, the individual civilization endows it with a technique to increase the strength and activity significantly, while its fundamental nature has changed.

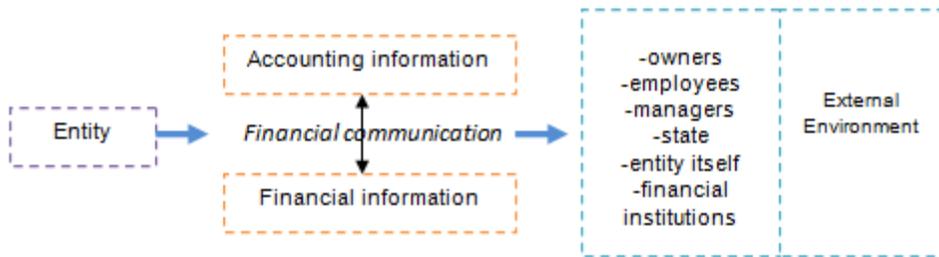
## 2. Methodology of financial communication

Entity-level communication is achieved by providing accounting and financial information through financial statements and financial and economic analysis, so that the external environment of the entity to be satisfied.

According to the statements of the above we can draw the following financial communication:

- ✓ Provision accounting and financial information
- ✓ Sources of information provision through financial statements and economical and financial indicators
- ✓ The destination information is the external environment of the entity.

Is drawn through communication link between the entity and the external environment. (figure no. 2) Entering barriers to effective communication, due to lack of a common reference system or a difference in experience between the entity and its external environment leads to failure.



**Figure no.2 - Graphical representation of entity-level communication**

**Source:** processing after Dorina Lezeu, Eduard Florea, 2004

### 3.Communication of financial reporting at international and nationally level

Financial statements of an entity represent the most important means by which accounting information is made available to decision makers.

Structure of financial statements is the following:

Annual financial statements	Simplified financial statements
<ul style="list-style-type: none"> <li>• Balance sheet</li> <li>• Profit and Loss Account</li> <li>• Statement of changes in equity</li> <li>• Statement of Cash Flows</li> <li>• Explanatory notes</li> </ul>	<ul style="list-style-type: none"> <li>• Simplified Balance sheet</li> <li>• Simplified Profit and Loss Account</li> <li>• Explanatory notes</li> </ul>

At international level the financial statements are different from country to country. Thus U.E. decided to implement Financial Reporting Standards (IFRS) in accordance with EC Regulation no.1606/2002 of the European Parliament and of the Council, aiming to increase transparency, improving the financial accounting communication and comparability of financial statements information and other financial reports.

IFRSs address the requirements from international level of developed and emerging economies to have a common set of accounting rules addressed to all those who work in business.

As it is shown in the IASB (International Accounting Standards Board), users use the information in the The financial communication, leading to economic decisions:

- a. deciding when to buy, hold or sell
- b. Assess management administration
- c. assess the entity's ability to meet salaries
- d Assess guarantees for loans made
- e. Determine entity profit and dividends

f. regulate the entity etc.

In Romania, the main law that governs currently the accounting and financial reporting environment comprises Accounting Law 82/1991, republished and Ministry of Finance Order 3055/2009 (OMPF 3055/2009).

Accounting Law indicates accounting framework provisions on Romanian entities and OMPF 3055/2009 refers to financial reporting and related accounting provisions, in accordance with European directives (Directive to IV for individual financial statements and VII to Directive for consolidated financial statements).

#### **4. Case study**

The entity's financial communication is achieved most of the times through financial statements. A basis of these reports we can see the approach of a business entity from one financial year to another.

To demonstrate the communication within an entity will present research conducted for 4 business entity of 4 different counties, currently incapacitated for liquidity, according to BDI (Bulletin of insolvency proceedings) no. 4720-4817 of 18.03.2013. The study refers to the period 2008-2011, having as a real data information provided by the Ministry of Finance of Romania.

Referred business entity are:

- a. ALACOM IMPEX SRL, based in Deva, with the activity - retail of footwear and leather goods in specialized stores, founded in 2003.
- b. GENERATIV CONSTRUCT SRL, in Timisoara, with activity - other specialized construction, established in 2007.
- c. INTER EDIL GEO SRL, from Arad, as predominant activity - construction of residential and non-residential buildings, taking into being in 2001.
- d. MAGNOLIA 91 SRL, based in Oradea, with the activity of underway - Renting and operating of own or leased real estate, date of establishment 1991.

To reflect the situation of insolvency of companies, we drawn up Figure. 3 – financial data and indicators.

<u>SCALACOM IMPEX SRL</u>					<u>GENERATIV CONSTRUCT SRL</u>				
<b>Balance sheet</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Balance sheet</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Non-current assets	19.240	16.003	14.318	13.393	Non-current assets	49.488	28.320	28.320	28.320
Current assets	417.031	434.610	522.654	544.449	Current assets	818.600	790.290	719.037	671.709
Stocks	327.062	353.878	436.517	459.562	Stocks	301.564	442.666	308.913	289.068
Accounts	68.665	58.399	19.183	30.033	Accounts	11.334	78.143	72.461	2.003
Total assets	436.271	450.613	536.972	567.842	Total assets	868.088	818.610	747.367	700.029
Capital	200	200	200	200	Capital	600	600	2.000	2.000
Shareholders' Equity	217.328	228.507	238.390	242.820	Shareholders' Equity	36.711	152.748	267.028	217.271
Debts	218.943	222.106	298.582	315.022	Debts	877.667	677.185	491.662	482.758
Total liabilities	436.271	450.613	536.972	567.842	Total liabilities	868.088	818.610	747.367	700.029
<b>Profit and Loss Statement</b>					<b>Profit and Loss Statement</b>				
The turnover	648.718	521.138	478.394	376.707	The turnover	1.696.608	1.136.935	665.395	5.188
Total income	649.455	521.142	478.394	376.707	Total income	1.630.894	1.311.532	665.933	-20.939
Total expenses	584.890	502.396	459.893	371.369	Total expenses	1.695.332	1.165.370	428.849	28.818
Net profit/loss	54.291	11.180	9.883	4.430	Net profit/loss	128.641	137.037	110.346	-49.757
Gross profit margin	8,37%	2,15%	2,07%	1,17%	Gross profit margin	8,07%	12,05%	16,83%	-959,07%
Number of employees	3	3	3	3	Number of employees	15	0	3	0

<u>INTER EDIL GEO SRL</u>					<u>MAGNOLIA 91 SRL</u>				
<b>Balance sheet</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Balance sheet</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Non-current assets	341.121	266.884	269.787	180.570	Non-current assets	35.575	25.958	31.883	25.029
Current assets	2.400.431	3.132.409	2.175.950	2.216.368	Current assets	9.947	17.577	7.777	2.332
Stocks	8.229	78.226	0	1.160.017	Stocks	4.776	7.679	5.748	1.640
Accounts	427.660	164.626	138.913	137.438	Accounts	5.171	9.896	1.774	692
Total assets	2.741.552	3.399.293	2.417.737	2.376.928	Total assets	45.522	43.535	39.660	27.369
Capital	200	200	200	200	Capital	200	200	200	200
Shareholders' Equity	420.063	292.221	227.621	300.809	Shareholders' Equity	41.147	35.585	29.139	11.852
Debts	2.444.569	3.229.142	2.329.608	2.199.389	Debts	4.375	7.950	10.521	15.509
Total liabilities	2.741.552	3.399.293	2.417.737	2.376.928	Total liabilities	45.522	43.535	39.660	27.369
<b>Profit and Loss Statement</b>					<b>Profit and Loss Statement</b>				
The turnover	4.446.431	1.689.881	660.260	361.960	The turnover	94.114	94.104	93.488	45.287
Total income	4.539.007	1.715.480	669.115	362.116	Total income	94.125	94.105	93.488	45.287
Total expenses	4.530.422	1.836.439	717.265	274.689	Total expenses	87.045	96.140	86.849	61.215
Net profit/loss	2.827	-127.832	-64.600	72.989	Net profit/loss	4.727	-6.562	3.414	-15.928
Gross profit margin	0,06%	-7,56%	-9,81%	20,16%	Gross profit margin	5,02%	-5,91%	3,65%	-35,17%
Number of employees	10	5	3	1	Number of employees	1	1	1	1

**Figure no. 3 – Financial data and indicators**

**Source:** own processing

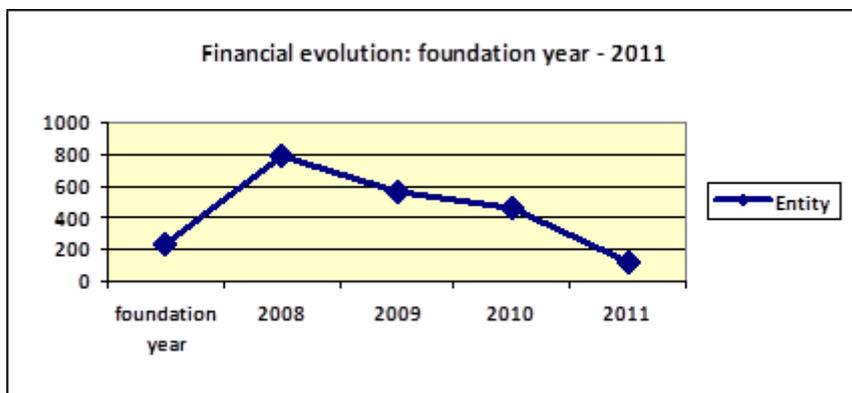
According to existing data in the balance sheets and profit and loss statement of entities results these:

- Commercial entity climax was reached in 2008 where each of the four entity has recorded positive value increasing as against the previous years.
- The year 2009 was the beginning situation of uncertainty on business continuity.
- From the data provided in the above documents are observed insufficient information provided.
- Those entity have reached a disability cash, due to the low level of communication to the financial statements of managerial level, as well as

management focusing on enrichment desire, and less on activity in a relatively constant rate, leading to continuity trust future activity.

- The balance sheet is not sufficient the entities communicating financial data, simplifying the it provides indicators of financial statements. You must put a higher value on the balance.

The evolution of entities can be represented graphically as follows:



**Chart no. 1 – Financial evolution of the entities**

**Source:** own processing

It is noted that the evolution of the four business entity has decreased from year to year, falling in the category of entities with an unhealthy position on the Romanian market.

Given all those elements we believe that the four economic entities do not understand the importance and role of financial communication, which has led to their position in the list of entities failing.

## 5. Conclusions

At the level of communication stays elements such as: transmitter, receiver and message so that the information passed is correctly perceived through the channel. Currently we can say that the communication accounting (financial) is not used correctly perceived within entity, because year by year, an increasing number of entity enters in the inability to continue operations.

One reason for this approach is the lack of generating communication of information through the monthly financial statements, quarterly or annually by the entity.

Objective of financial statements is to provide information about the financial position, performance and cash flows of the entity that are required at managerial decision making.

As a corollary, we can say that the presence of financial statements contributes to the enrichment information for users but also to strengthen accounting as a privileged source of information because it is the basis to any strategic and financial analysis.

In conclusion, communication must occupy a leading position in the expansion and continuation of any entity.

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# THE BEHAVIOUR OF ROMANIAN ACCOUNTANTS FROM TIMIS COUNTY: CREATIVE OR NON-CREATIVE

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**Abstract:** *Creativity and innovation are two very trendy concepts for the current period which is characterized by a very difficult economic context. The creativity and the innovation usually stimulate the competitiveness of economic organizations. But what about creativity in the field of accounting? Are the accountants creative? Is creativity benefit for the quality of accounting information? The aim of our study is to review study the accounting literature and practical experience of Timis county organizations in order to create a picture of Timis county accountants' behaviour. For the achievement of the proposed objectives the authors based their opinion on a research study by questionnaire realized at Timis county level.*

**Keywords:** Financial accounting, creative accounting, management accounting, IFRS

**JEL classification:** M41

## 1. Introduction

Globalization has become the main theme for conferences and seminars debates in the international economic community. It is a key phenomenon of 21 century, affecting about every aspect of our lives, including even economic behaviours and in accounting area. Globalization, which characterizes the economic world, led to the necessity of understanding and comparison of the financial statements of different corporations and also to present the fair view of businesses rather other interests like public interest in taxation.

Romanian accounting developed remarkably in the last twenty tree years, as shown by the flow of accounting literature in this field. This development is mainly the result of EU accession as well as of harmonizing and subsequently converging national, European and international accounting standards.

The globalization increased for sure the competitively of multinational companies and asked for creativity and innovation for all area of activities.

Accounting has always been considered the main language and very tool of business. It has always concerned itself with determining how a business is doing and what the bottom line is. But over the last twenty years, the field of accounting has been changing dramatically in response to such explosive trends as the computer revolution, increased national and international regulations, and frequent tax law changes all over the world, the globalization of business, and the on-going growth through green fields expansions or mergers and acquisitions followed nowadays by downsizing and restructuring of corporations facing economic difficulties. In this increasingly complex and competitive business environment,

accounting skills are very much in demand and accounting has become a dynamic career for many young people.

The accountants have a very important role to prepare, report, and control the financial position and the financial results of all companies who act within the world-wide economy.

This period brings a decrease of world economy, the most affected countries being the poorest one.

Taking into consideration this economic context we try to find out which the behaviour of accountants is and which the evolution in this field is. We know very well that the decrees of economies stimulate companies and individuals to become more and more innovative, more and more creative. By this paper we try to find out if the behaviour of Romanian accountants follows the trend and they become creative.

## **2. Theoretical background**

At international level different accounting patterns of behaviour can be identified which are the outcomes of many years of development influenced by factors such as cultural values, legal systems (even tax regulations), political orientations, and economic development. The challenge now is to adapt what has served well in the past to the new global imperatives of transparency and credibility of accounting in order to facilitate efficient flows of capital to the world's financial markets.

Nowadays creativity is essential to problem solving and requires productivity, unconventionality, and the capacity to build on preceding innovation. Creativity is essential to problem solving of a company and represent a previous step to innovation. Creativity requires unconventionality and the capacity of an economic entity to build on preceding innovation.

At international level an important issue is represented by the professional accountancy work and how much creativity needs. In order to answer to this challenge we have to see before the diverse field of activity where an accountant could work.

Most of accountants seem to be involved in financial accounting, a significant part of them work in taxation and finally a smaller part of accountants are involved in audit and managerial accounting.

Usually financial accounting activities seem to require for more creativity than does taxation and auditing. Speaking about managerial accounting work, this activity require an intermediate level of creativity. Hood and Koberg examined few years ago the relationship among public accounting firm culture and accountants' measured creativity. By this survey they found no relationship between accountants' measured creativity and firm culture, job satisfaction, or turnover intention.

The international literature has infrequently investigated the nature and consequences of creativity in accounting work. Speaking about the accountant's creativity the humanistic psychologist Abraham Maslow (1998) argues that accountants have the smallest vocabulary of any profession, lack creativity, fear change.

*Other important issue is related to the level of creative accounting within Romanian companies from Timis County. It is a tabu subject but creativity for accountants means to try to full fill the financial objectives with the help of accounting standards flexibility.*

Anyway creativity has a bad name within the accounting industry for obvious reasons. Although, apparently, accounting seems to be a straightforward mechanical process which does not involve creativity and imagination, essentially, we can notice that most of the companies use a correction of the result and an adjustment of the statement of account, therefore, being able to elude the existing judicial and accounting rules.

Subject of Creative Accounting is normally portrayed maligned and negative act. Creative accounting brings to mind the various huge scandals of yesteryear that took down mighty firms. Creative accounting referring to accounting practices that may follow the letter of standard accounting practices, but it deviate sometime from the spirit of those rules.

Creative accounting, as is known in Europe, or earnings management, as is known in United States, is defined by different ways:

- For Schipper "creative accounting" can be equated with disclosure management, in the sense of a purposeful intervention in the financial reporting process;

- Creative accounting, in Turillo and Teller's opinion represents "an instrument of improving annual accounts, a prop and a result of financial and fiscal engineering", while Trotman (1993) argues that this concept "allows the display of a new favorable image of the results and the statement of account".

- For Merchant and Rockness creative accounting means any action on the part of management which affects reported income and which provides no true economic advantage to the organization and may in.

- Naser said "creative accounting may be defined as: the process of manipulating accounting figures by taking advantage of the loopholes in accounting rules and the choices of measurement and disclosure practices in them to transform financial statements from what they should be, to what preparers would prefer to see reported and the process by which transactions are structured so as to produce the required accounting results rather than reporting transactions in a neutral and consistent way" Park argues that creativity contributes to success in professional accounting. Usually individuals who are seeking to be successful in the diverse world of accounting must be able to use creative problem-solving skills in a consultative process. But this situation is also available also for accountants?

Along Europe the incidence of creative accounting is particularly strong in the United Kingdom compared with the countries of continental Europe such as France, Germany, Spain or Romania where the Roman law tradition applies and accounting rules do not allow the flexibility that enables accountants to make choices that favour them.

In USA the common law tradition is applied as in the UK, but the high risk and cost of litigation have led the accounting profession to formulate agreed, highly detailed procedures that can be justified in court. By contrast, litigation risk is much lower in the UK.

### **3. Research methodology and results**

The object of the current article refers to the presentation of the conceptual delimitations regarding creativity and its application into accounting area by a detailed description of theoretical framework proposed by some authors, as well as the brief review of the literature written on the topic in the last 30 years.

Also, we can see how the specific literature regarding the aspects concerning the magical land of creativity we have decided to shortly review the main aspects approached at the European level regarding the role in the field of accounting.

In order to achieve this aim, we analyzed approximately 10 academic articles available in three scientific databases.

Our approach regarding the exploratory research includes three stages:

The first consists in finding the information about creativity and creative accounting in the databases.

The second stage consisted in grouping them on the most frequently approached themes.

The third stage consisted in a survey on 31 big companies from Timis County regarding the creativity and creative accounting within accountants.

In our research, we have used the deductive method concluding some remarks based on the already existing theories, the type of research used being the fundamental one. The utility of such a research contributes to the assurance of the premises for the development of future research.

Regarding the employees involvement in the field of accounting the majority of Timis county companies involve their employees in different financial accounting and reporting activities. On the other hand taxation seem to be not so important for this companies looking at the percentage of employees involved in this field of accounting. This could be a wrong conclusion if we take into account the real situation. The majority of big companies from Timis County use external services in order to cover taxation needs.

Managerial accounting seems to have an increasing role for this period characterized by financial crisis. Mainly the multinational companies are trying to develop the controlling activities and the number of people who are working in this field.

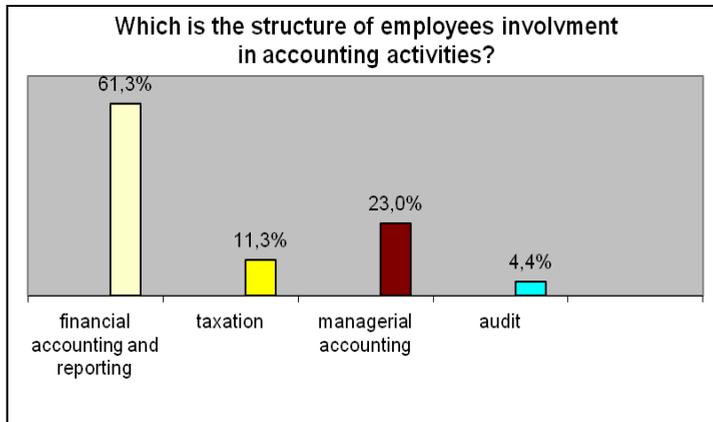


Figure 1 The structure of employees involvement in different accounting activities

For each category of accountants, as graduate of a business university degree, the creativity is quite important in order to catch different kind of accounting study cases.

But the level of creativity for these 4 categories of accountants seems to be very different. Thereby for the professionals involved in financial accounting and financial reporting the level of creativity is very important.

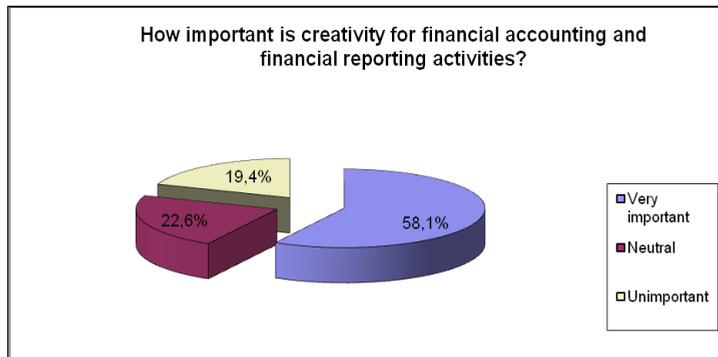


Figure 2 The importance of creativity for financial accounting and financial reporting

The results are very obvious negative in case of controllers and professionals in taxation (less than 15%). The big majority of these categories are considering the creativity is not so important in their activity.

Controllers work is fully dedicated to internal use of the information for controlling different business processes and for management decision making. Therefore, creativity might be required only for the information structure and content presented in order to help the internal users to better understand the facts. The accuracy of information is the key characteristic of their task and the information provided is asked by the business itself giving no much room for interpretations.

For auditors, the creativity seems to be at least as important as for the professionals involved in financial accounting and financial reporting. Almost 61% say creativity and logical is very important for auditors in order to discover creative fraud attempts. Fraudulent financial reporting has become an important concern for the audit profession (especially that the constant audit failures from the past two decades have decreased the public trust in the audit profession) and jumping in the client shoes in order to understand the potential information manipulation became a must. Therefore, creativity of the client has to be mirrored by creativity of the auditor. By thoroughly understanding the client's stakeholders' interests and the interests of the entity itself and identifying the conflict between these parties the auditor can identify the potential areas for creativity.

However, even if this seems to be the natural and much needed development of the audit profession there is a different trend noticed within the audit profession. While the auditors recognize in the answers provided that the creativity is important, instead of applying it in the audit missions performed, they revert to the basic audit procedures that used to be efficient and effective in the early years of audit – substantive tests of details procedures. This trend was borne also by the big failures that proved to be very costly to the audit companies that performed the audit of the respective companies. While the courts that analyzed the audit work performed concluded that the auditors' analysis was subjective and biased, they fined the audit companies with huge amounts. Thus, in order to be able to prove in any court that

the auditor complied with its obligation, they removed from the audit procedures most of the analytical procedures that might be interpreted as biased or subjective. If this trend will continue, the auditors will become document checkers and the probability of risk of failure will increase.

#### **4. Discussions and conclusions**

Our research study is an exploratory investigation of some interrelated questions exploring the accountants and their creativity.

Speaking about the accountant's creativity the humanistic psychologist Abraham Maslow (1998) argues that accountants have the smallest vocabulary of any profession, lack creativity, fear change.

But this is an international approach and we can not say that this approach is available also for Romania of nowadays. The accountant's behavior in each country should deal with social norms. As well the cultural characteristics of a country can generate important differences between accountant's decisions/behaviors.

For the Timis county we can see that the creativity is a characteristic of a big part of accountants community, mainly for professional involve in preparation of financial statements. That creativity should be discover by auditors and should be limited by detailed implementing rules.

As well our research is limited by several design and measurement choices. We measured creativity among professional accountants in a single county. The generalizability of our results from county to country level is untested. Similarly, our samples of accountants are nonrandom, which further limits the generalizability of our results.

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# IMPACT OF ETHICAL VALUES PROMOTED BY PROFESSIONAL ACCOUNTANTS ON THE ORGANIZATIONAL CULTURE

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**Abstract:** *This paper aims to point out the contribution of professional accountants to the sustainable development of organization and the way they generate sustainable organizational success through their direct involvement in creating organizational culture. Professional accountants can be considered value creators in organizations because of their commitment in developing and implementing strategies, policies, plans, structures and governance measures which set the framework for the creation of added value. The ethics and values of conduct in organizations are supported by professional accountants through their behavior and the actions they carry out. Thus, the quality of professional judgment becomes a differentiating factor for accounting professionals.*

**Keywords:** organizational culture, ethical values, ethical behavior, accounting professionals.

**JEL classification:** M41, M49.

## 1. Introduction

In international literature, organizational culture has been interpreted in different ways by many researchers famous in this field.

Authors such Thomas J. Peters and Robert H. Waterman in "In Search of Excellence", which became a best-selling success, defined organizational culture as "a dominant and coherent set of values shared by the organization's members, induced by symbolic means." The two authors have contributed to spreading the concept of organizational culture, demonstrating through concrete cases there is a close link between large corporations' dimensions of organizational culture and their performances.

Author Antonio Strati (1992) stated: "Organizational culture is a set of symbols, beliefs and behavior patterns learned, produced and recreated by people who devote their energy and life's work to an organization. It is expressed in the design and organization of work, the events created by this culture and into the services the organization produces. "

American researcher Edgar Schein (2010) defines culture of economic groups as "a pattern of basic assumptions shared by the group in solving the problems of external adaptation and internal integration, that have worked well enough to be considered valid and, therefore, good to be shared with other new members as the correct way to perceive, understand and feel in relation to those problems."

According to the author Geert Hofstede (1996), organizational culture can be defined as "a collective mental programming that distinguishes the members of an

*organization of the members of other organizations."*

French author Maurice Thevenet (2010), in a recent paper, considers that there is a culture specific to each enterprise, "*consisting of ways to meet current situations occurring in the professional life*" and proposes a description of the organizational culture, looking at it as an essential resource of organizations, which must be taken into account by their management.

In a practical study, author Samuel Certo (2002) defines organizational culture as "*a set of common values and beliefs that the members of the organization have on the operation and existence of their organization.*"

According to some American authors, organizational culture "*involves rituals, symbols and stories associated with categories of people, offering an insight into their beliefs and values, the things that are important to them and the reasons behind those choices.*"( Dygert and Jacobs, 2006)

Also, the term organizational culture has been debated as well in the specialized literature in our country by many authors concerned with this field of interest.

Thus the author Alexander Puiu (2007), in "Management - analysis and comparative studies", defines organizational culture as "*a structured set of material and spiritual results of the organization, which integrates a system of values and beliefs that is systematically cultivated and transmitted among its members and outside the unit.*" This view is different because it highlights both the spiritual and material elements that make up the culture of an organization.

Romanian authors Ovidiu Nicolescu and Ion Verboncu (2008) defined organizational culture as "*a set of values, beliefs, aspirations, expectations and behaviors shaped over time in each organization prevailing therein and conditioning directly and indirectly its functionality and performance.*"

In the perspective of Romanian authors Tatiana Gavrila and Viorel Lefter (2002), organizational culture reflects "*managers' thinking, ethical standards, types of behavior, management policies adopted, traditions, attitudes and specific events that have marked the evolution of the firm*".

Authors Eugen Burdus and Gheorghita Căprărescu (1999) stated that organizational culture is "*an assembly of artificial products, core values and concepts, modes of thinking and behavior patterns that are generally accepted in an organization as common basis for action*".

Organizational culture "*is represented by the beliefs of an organization's employees expressed through a system of attitudes, behaviors, empathies, expectations, aspirations and values of performers and managers, outlined during its development, determining in a considerable manner its functionality and performance while having an impact on the satisfaction of its members*".( Ciochină, 2004).

Analyzing the definitions given by great researchers, both in the international as well as in the national literature, our opinion is that the term organizational culture reflects a set of principles, strategies, ethical and behavioral values implemented within an organization in order to increase its economic and financial performances.

The characteristics of organizational culture were identified by several researchers depending on the approach of the term organizational culture as follows:

- Authors Peters and Waterman identified eight characteristics as common features among companies with superior results. These included: *unity of action and decision making; openness to customer; assuring quality and reliability; atmosphere that encourages creative thinking and innovation;*

*respect and focus on the contribution of each employee; maintaining the basic philosophy of the company; performing in domains and business related to organizational management; maintaining the number of senior management positions at a minimum; decentralization and centralization of certain functions.*

- Author Gary Johns (1997), in one of his works of reference, pointed out synthetically the following features of organizational culture:
  1. Culture is a *true lifestyle* for members. Organizational culture becomes evident only when it is compared to that of other organizations or is subject to change;
  2. Culture tends to *be stable over time* because it involves assumptions, values and core beliefs.

Unlike the characteristics identified by the previous researchers, other features of organizational culture have been identified such as:

- organizational culture comprises an integrated model of human behavior: values, ethical standards, symbols, beliefs, aspirations accepted by most of the employees;
- these components are formed over time and become more powerful;
- the behavior pattern is characteristic and dominant and is stable over time;
- organizational culture characterizes all members of an organization or most of them;
- organizational culture plays an important role in integrating employees and adaptation to the external environment of the organization;
- organizational culture takes into consideration the material results and expresses itself through the products and services the company offers.

Factors that may influence organizational culture are business environment, leadership, management practices and the interaction process, both formally and informally, and they should be taken into account in any analysis, especially when change is needed in the organization. As stated by Schein (1991), culture operates with a default set of beliefs that can not be changed unless they are brought to the surface and analyzed.

Organizational culture influences the expectations of individuals that are part of an organization, defines the type of persons who will fit into the organization and affects how people interact with each other both in the internal and external environment. Regulations imposed by organizational culture determine what is desirable or undesirable, the appropriate or inappropriate behavior in an organization, and their lack affects the optimal function of organization.

## **2. Interrelation organizational culture – ethical values**

Organizational culture includes values, attitudes, beliefs and behavioral norms that consider the ethical component transmitted by the founders or senior managers and adopted by all employees of an organization, provided that they meet their expectations. Once these expectations are adopted they translate into behaviors and attitudes expected both within the company and in relation to the external environment. Behaviors, attitudes are formed over time, based on the rules of conduct established by codes of conduct, but also on plans, company objectives, job descriptions, and reward and punishment system. Ethical behavior is a prerequisite to obtain high performance and competitive advantage in business environment.

An important place is held by managerial ethics, which determines the behavior and actions of managers within organizations and the manner in which decisions affect individuals and social groups.

Romanian managers should be aware that the starting point in determining ethical behavior is the organizational culture, by the mean of which information about the desired ethical climate are transmitted. Companies that are characterized by positive and strong ethical climate set clear expectations from their members, thus creating preconditions for increased performance.

Decision of one person can influence the trajectory of an entire organization. Contemporary organizations illustrates how managers, in their run for success and following own interest, have decreased the company's values, if not the total disappearance of their business because of unethical decisions. The Corporation's Savior became its gravedigger. And it was not a matter of competence!

In the organizational context, business ethics plays a fundamental role in promoting or undermining the image of the corporation. Ethics means a set of standards used to assess the correctness or unfairness of a person's relationships with others in terms of truth and justice.

Professional ethics also plays a dual role: an ethical reflection applied to a particular field of work (profession) or the rules established by a professional group to ensure the practices of each of his members, gathered in a code, including the code of ethics of the profession. Broadening of the meaning of the word „code” led to the inclusion in it of rules set by organizations outside professional ones, such as governments. This raises the question of the relationship between "public" and "private", between professionals and non-professionals. Professional accountants are subject to the strictest ethical standards.

The ethical decision is a process meant to explore all aspects of choosing between several possible actions, depending on the organization's recognized moral values, and then to weigh those options and recommend a course of action.

Distinctive features of this method of ethical assessment of an organization are:

- procedural methods, thus more objective; procedures are generally designed so as to be assimilated relatively easily and not requiring any special ethical-philosophical knowledge;
- actions applied to resolve ethical issues that have great social, economic and political importance - through its impact on people and the financial interests involved (acceptance of new technologies, the development of ethical codes, the adoption of public policies and so on.);
- a complex framework, that must be organized by professionals and involves a large number of persons: well-structured groups of evaluation, different decision methods, techniques to achieve consensus, standards for reporting results etc.
- scientific competence when the problems assessed are not collected from the public agenda, but the work of various organizations (the consequences of the use of genetically modified organisms, the probabilities of those consequences, which are the stakeholders and so on).

Professional accountants play a central role in the organization's operating system. In today's economic, complex and fast evolving business environment, the financial position will be the champion of change. In this environment, the key will be the ability to deliver correct professional judgment on multidimensional subjects.

Central attributes of professional judgment, technical excellence and ethics should be protected and promoted further on - and this is why we need to increase the number of accounting professionals for our economies. They will be more than technically proficient.

The attributes possessed by accountants facilitates entrepreneurship, helps managers create added value and manage risk. They are specialists in building partnerships and communicate effectively. In other words they are the ones who add value to the business.

Within organizations, professional accountants may have different roles as creators, mediators, custodians and rapporteurs of sustainable value in terms of both performance and compliance:

- as creators of value, professional accountants have a role in the development and implementation of strategies, policies, plans, structures and governance measures that provide the framework for sustainable value creation.
- as mediators of value, accounting professionals have a role in informing and guiding decision-making process and implementing strategies to create sustainable value.
- as preservers of value, professional accountants provide protection for the strategies of sustainable value creation against strategic, operational and financial risks and ensure compliance with regulations, standards and best practices.
- as rapporteurs of value, accounting professionals are providing transparent information that give lasting value to stakeholders.

### 3. Conclusions

Organizational culture reflects a set of principles, strategies, ethical and behavioral implemented values within an organization in order to increase its financial and economic performance. Factors that may influence organizational culture are business environment, leadership, management practices and the interaction process, both formally and informally, and they should be taken into account in any analysis, especially when change is needed in the organization.

Professional accountants play a central role in the organization's system of operation and development. Attributes possessed by accountants facilitate entrepreneurship and help managers create value and manage risk. They are specialists in building partnerships and effective communication. In other words they are the ones who add value to the organization fully.

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***SUB-SECTION: AUDIT***



## THE EFFICIENCY OF FOREIGN INVESTMENTS IN THE FINANCING OF AUDITED ENTITIES

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**Abstract:** *The auditing of the financial statements is a certification service intended to offer the users more credibility regarding the quality of accounting information. This is the reason why the present study selected all the Cluj county entities that, according to the public information, between 2005-2012 were subject to financial audit in order to estimate, at this level, the influence of foreign investments in the financing structure. The information provided by the financial statements of these audited entities (with or without foreign participation in share capital) was analyzed for the calculation of the relevant indicators to determine the evolution of the equity financing, the recourse to external financing funds, the ratio of external funds and equity funds used for financing and the assessment of the efficiency of foreign capital invested at the level of these entities. In order to meet this objective, we considered the information from the financial statements of the concerned entities, published between 2008-2011. For the relevance of the study, we eliminated the audited entities that did not have financial statements published in all of the four financial years for various reasons (dissolution, liquidation, merger, or temporary suspension of activity) or had negative working capital. The financial statement information was analyzed in view of the calculation for each audited entity of the rate of financial autonomy, the debt ratio, the debt to equity ratio and of the rotation speed of equity. The audited entities were classified into 2 major categories: audited entities with a foreign participation in share capital and audited entities with the whole share capital financed by equity funds. We applied the simple average method at the level of the both audited entities categories for each of the four analyzed indicators. Furthermore, we performed an analysis from the static and dynamic point of view of the results. The conclusions that we reached are relevant for the emphasis of one of the two categories of audited entities for one or the other financing methods, for a specific proportion of the financing forms and for the assessment of the management of shareholders' capital in the analyzed time span.*

**Keywords:** audited entities; financial statement; foreign investments; equity funds.

**JEL classification:** M41, M42

## **1. Introduction and Literature Review**

The financial statements of the audited entities offer the users more credibility. The auditors play an important part in offering a guarantee in what concerns the reliability and accuracy of the information in the financial statements of the audited companies. (Boța-Avram, 2012) The financial audit is in fact a certification service that results in a report in which the auditor expresses an opinion concerning the compliance of the significant aspects of the financial statements with the general accepted principles of accounting (Loebbecke, 2010). Financial auditing brings many benefits, among which we mention, considering the relevance for the present study, the following: the increase of trust of the users in the accounting information Ghiță, 2008), the increase of trust in the company, the detection and prevention of significant alteration of information in the financial statements (Oprean, 2007). There are also reviews in the literature according to which the auditor's role in society is that of validating the truth and fairness of the financial statements (Dart, 2011). Therefore, the activity performed by auditors is placed by investors in a special position of public trust (Martens and McEnroe, 1992). Another clue as to enhance confidence in the activity performed by auditors is the process by which auditors has selected, retained and compensated. In addition, the literature accomplishes two goals: identification of the problem of audit independence as an outcome of vesting the authority to make an auditor-related decisions with corporate boards of directors, and proposing a structure to allow shareholders to direct path for deciding on choice and auditor compensation (Rashad, 2002). Therefore, in order to accomplish this study were selected only the audited entities because their financial statements indicate a high level of credibility, based on these considerations.

## **2. Research Methodology**

The entities that between 2005-2012 were subject to statutory audit according to the provisions of the OMFP 3055/2009 represent the basis of the present study. According to these provisions, the audit of the financial statements is mandatory in the case of entities that at the drafting date exceed the limits of two of the three following size criteria:

- total assets 3.650.000 Euro;
- net turnover 7.300.000 Euro;
- average number of employees during the financial year 50.

We took into account in an exhaustive manner all the audited entities during this period across the Cluj county (304 entities). We analyzed information regarding these entities for the financial years 2008-2011 in what concerns:

- the incidence of foreign investments on the financial status
- the level and evolution of assets, of equity funds, of debts and turnover;
- the level of financial dependence and management of the controlled resources

In order to meet the objective of this study and to guarantee the relevance of the results, we eliminated from the study 102 audited entities that did not publish between 2008-2011 any information through the financial statements. This was due to the changes that appeared in the structure of the social capital and/or the activities (mergers, dissolutions, liquidations, insolvencies, temporary suspension of activity). Also, 29 other entities were not taken into consideration due to their negative values of their equity funds. Consequently, out to the total 304 entities that were subject to the statutory audit across Cluj county between 2005-2012, we included 173 audited entities in our research. Therefore, our study is exhaustive in what concerns all the

entities audited in this period in the Cluj county and that published in all the 4 years (2008-2011) their financial statements and had positive values of their equity funds. In view of the analysis of the evolution in the temporary interval of 4 years of the relation between foreign investments in the audited entities on one hand and the financial dependence rate, namely the management of the controlled resources on the other hand, we used some indicators relevant in this respect:

- Rate of financial autonomy ( $R_{FA}$ ) to emphasize the evolution of the financing of the audited entities activity from equity funds (Bătrâncea, 2008);
- Debt ratio ( $D_R$ ) in order to see how the audited entities' assets are financed on the basis of debts to third parties;
- Debt to Equity Ratio ( $D_{ER}$ ) to emphasize to what extent the resources of audited entities resources were purchased with foreign capital;
- Rotation speed of equity ( $R_{SE}$ ) to show management efficiency in what concerns the shareholders' capital in the analyzed time span (Greuning, 2005).

The above-mentioned indicators were calculated for each audited entity. These were divided into two categories: entities with foreign participation in share capital and entities without foreign participation in share capital. In view of the interpretation of the results, we applied the simple average method on the values of the indicators in each of the two categories, according to the involvement/non-involvement of foreign investments.

### 3. Results and Discussions

Out of the 173 entities audited in the present study (positive value of equity funds and published financial statements for the financial years 2008-2011), 26 had foreign participation in share capital (foreign investments), and 147 audited entities didn't have foreign participation in share capital.

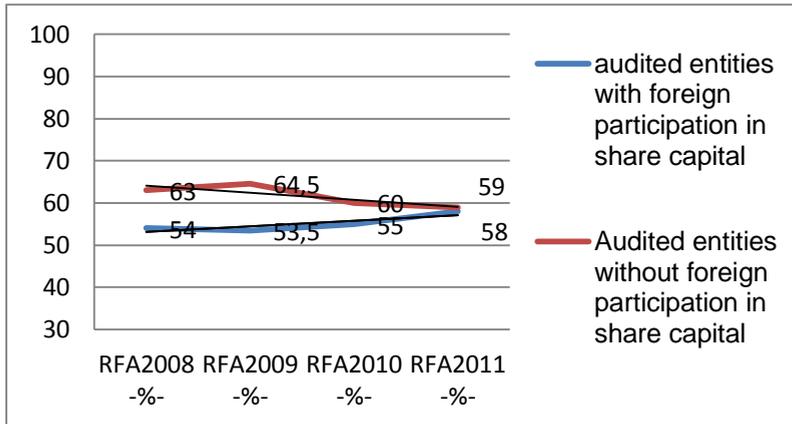
In the beginning, the study analyzed the extent to which the audited entities finance their activity out of equity funds, showed by the rate of financial autonomy ( $R_{FA}$ ). From a dynamic standpoint, the increase of this value is highly appreciated, and the financial security interval is [30%, 100%] (Achim, 2009). The results of the study show the following evolution on the long term of the rate of financial autonomy for the two categories of audited entities:

**Table 1:** The evolution of the rate of financial autonomy for the audited entities in relation with the foreign participation in share capital

Foreign participation in share capital	Rate of Financial Autonomy (RFA)			
	RFA2008 -%	RFA2009 -%	RFA2010 -%	RF2011 -%
YES	54	53.5	55	58
NO	63	64.5	60	59

Source: Statistical processing performed by the authors

We notice that both categories of audited entities are situated inside the safety interval, almost in its center. This shows that the audited entities finance their activity mainly from equity funds (Self-financing). During the economic-financial crisis, the audited entities were not confronted with difficulties in facing the payment necessities and attracting external financing resources would not be mandatory.



**Figure 1:** The evolution of rate of financial autonomy for audited entities  
 Source: Statistical processing performed by the authors

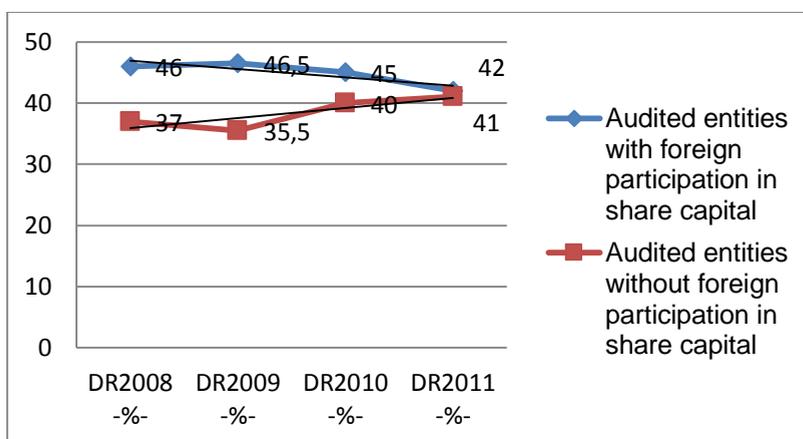
Taking into account the dynamic aspects regarding the evolution of the rate of financial autonomy, according to figure 1, we can notice that the audited entities without foreign participation in share capital show values superior than the other category of entities, which means that these tend to finance their activity especially of equity funds (increase of share capital, undistributed profit) and recourse less to external financing sources in comparison to the audited entities with foreign participation in share capital. The opposite trends set by the two categories of entities are worth mentioning. The audited entities without foreign participation show a decrease in the preference for the financing from equity funds (drawback), whereas the audited entities with foreign participation in share capital tend to choose the financing mainly from equity funds (Advantage). Regardless of the financing options, at the 2011 level the percentages of the financing options are the same. In the case of both types of audited entities, these tend towards the percentage of 58-59%, namely at the middle of the safety interval (reach the optimal value). The stabilization of the rate of financial autonomy for the audited entities from Cluj county at the optimal value at the 2011 level means adequate contribution of equity funds to the development of activity and the convergence of corporate governance politics towards an external adequate indebtedness (even optimal). Moreover, we studied the evolution of the (Debt Ratio) ( $RPF_A$ ) to show the extent to which the assets of the entity are financed by the total indebtedness (on the short and long term). In the specialized literature, the opinions tend to show a preference for an ascending trend and the maintenance of the indicator in the safety level [0%, 30%].

**Table 2:** Debt Ratio evolution for the audited entities - the foreign participation

Foreign participation in share capital	Debt Ratio (DR)			
	DR2008 -%-	DR2009 -%-	DR2010 -%-	DR2011 -%-
YES	46	46.5	45	42
NO	37	35.5	40	41

Source: Statistical processing performed by the authors

Both categories of audited entities show values that slightly exceed the limit of the safety interval, thus the assets are excessively financed on the basis of long and short term debts towards third parties. This aspect can be considered to be unfavorable if we refer only to the extent to which this indicator for audited entities complies or not with the limit of the safety interval. However, if we analyze the debt ratio evolution from a dynamic point of view during the financial years 2008-2011 we obtain the following information according to figure 2:



**Figure 2:** The evolution of Debt Ratio for audited entities

Source: Statistical processing performed by the authors

The audited entities with foreign participation in share capital show an ascending trend during the four financial years and had a decrease of 8.7%. Therefore we noticed the trend of decreasing the excessive financing on the basis of third parties debts (advantage) and consequently the increase of the financing based on equity funds. In the case of audited entities without foreign participation in share capital, we noticed an opposite trend (unfavorable evolution). Although the percentage of financing on the basis of third parties debts is situated over the safety limit, we noticed an ascending trend between 2008-2011 in what concerns the preference for the insurance of the financing from this source (10.81% increase). In what concerns the evaluation of the type of financing of the audited entities activity it is important to determine the extent to which the economic resources of the company are procured from foreign capital. In the case of the debt to equity ratio (DER) we consider that a descending evolution of the indicator is favorable. The upper accepted limit considered to be reasonable in the case of this indicator is 200%. The total amount of debt must be twice bigger than the value of equity funds of the entity

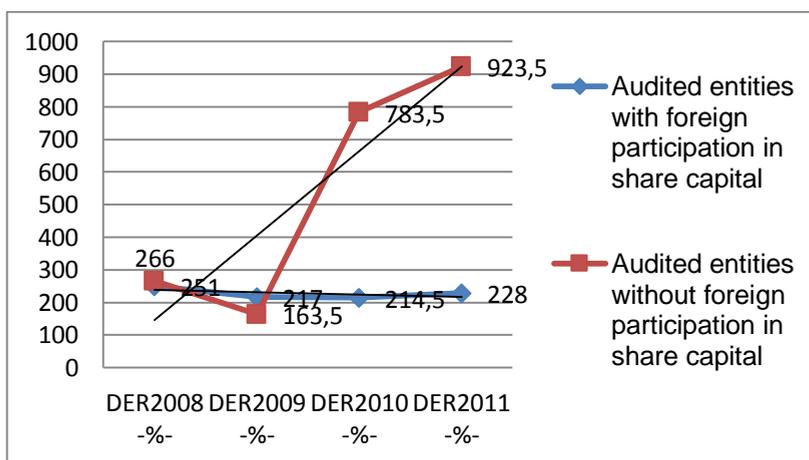
so that it will not affect the capacity to support long term debt. The debt to equity ratio for the audited entities show between 2008-2011 values that exceed the maximum acceptable limit that guaranteed security in what concerns the reimbursement capacity of long term debts.

**Table 3:** Debt to Equity Ratio Evolution for the audited entities in relation with the foreign participation in share capital

Foreign participation in share capital	Debt to Equity Ratio (DER)			
	DER2008 -%-	DER2009 -%-	DER2010 -%-	DER2011 -%-
YES	251	217	214.5	228
NO	266	163.5	783.5	923.5

Source: Statistical processing performed by the authors

Even though the audited entities with foreign participation in share capital show indicator values that exceed the maximum safety limit, these can be considered minor (an average of 13.81%). This is an oversized value of the third parties debts (external resources) as compared to the debts towards shareholders (internal resources). Whereas in the case of this audited entities categories we can say that the exceeding of the safety limit is reasonable, we cannot say the same thing on the audited entities without foreign participation in the share capital. In this case, the exceeding of the maximum acceptable limit, during the four financial years is an average of 167.06%. At the level of all audited entities in Cluj county that published financial statements between 2008-2011 and had positive equity funds, the shareholders are not very involved from a financial point of view in the progress of activities; they avoid assuming risks deriving from the equity funds investments and they prefer the alternative of attracting external resources for financing. To have a complete overview on these aspects we need to present the evolution on the long term of the debt to equity ratio, according to figure 3:



**Figure 3:** The evolution of Debt to Equity Ratio for audited entities

Source: Statistical processing performed by the authors

Although they only slightly exceeded the maximum value acceptable for the debt to equity ratio (unfavorable aspect), the audited entities with foreign participation in share capital show a descending evolution trend of this indicator (favorable aspect). Consequently, we noticed an increase in the funding of business out of equity funds, rather than external financing (Bank credits, commercial credits).

We cannot say the same thing regarding the audited entities without foreign participation in share capital, where the debt to equity ratio tends towards an exponential ascending trend (unfavorable aspect).

Consequently, the equity financing of shareholders decreases and the long term debt financing increases, through financial, commercial, fiscal and wage debt.

The risk represents the decreased capacity of the audited entities from this category to support long term debt. The efficiency of using the shareholder's capital (the number of rotations performed) to obtain a certain turnover is measured with the rotation speed of equity indicator. An increase in the rotation speed of equity reveals an increase of the management efficiency in the administration of shareholders' capitals.

**Table 4:** Rotation Speed of Equity evolution for the audited entities in relation with the foreign participation in share capital

Foreign participation in share capital	Rotation Speed of Equity (RSE)			
	RSE2008 -%	RSE2009 -%	RSE2010 -%	RSE2011 -%
YES	7.5	5	6.5	4.5
NO	2	2	2	6

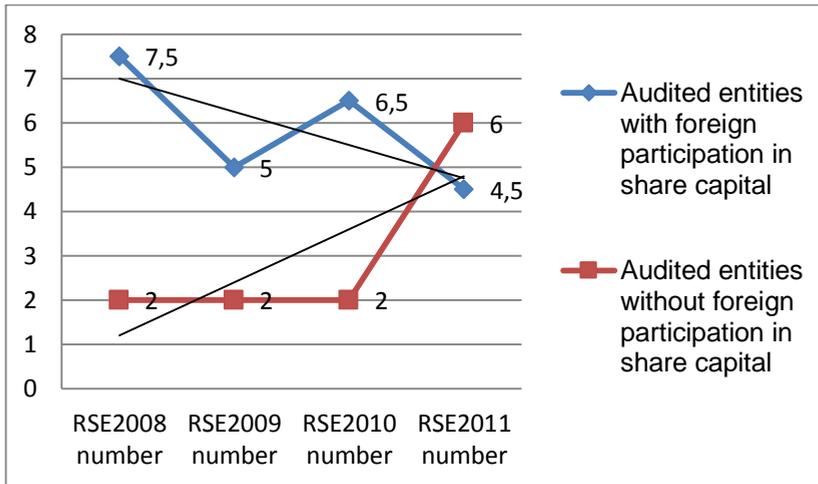
Source: Statistical processing performed by the authors

The audited entities with foreign participation in share capital show superior efficiency levels in what concerns the use of shareholders capitals, as compared to audited entities without foreign participation in share capital. Apparently, the foreign investment involvement entails the high efficiency of the activity.

To have a complete overview on the capital use efficiency it is important to perform a dynamic analysis of the rotation speed of equity for the financial years 2008-2011, according to figure 4.

Although high values of the indicator were registered and consequently a high efficiency, the audited entities with foreign participation in share capital points out a decrease on the long term of this level of performance, the trend is a descending one.

In the financial year 2011, the rotation speed of equity shows a decrease in relative sizes as compared to the financial year 2008 with 40%, the efficiency level became inferior to the audited entities without foreign participation in share capital.



**Figure 4:** The evolution of Rotation Speed of Equity for audited entities  
Source: Statistical processing performed by the authors

On the other hand, the latter ones show an ascending trend of the evolution of management efficiency in the administration of shareholders' capital, the level of the rotation speed of equity indicator showing increases in the analyzed time span with 200%.

These entities reach the 2011 year level to be more efficient as compared to the audited entities with foreign participation in share capital.

We consider useful for getting an overview and some relevant information on the results of the research, the centralization of information presented above. Therefore, it can be achieved the following synthesis on the results of the study, which includes the analyzed aspects as well as the results obtained for the two categories of audited entities, as it results from table no. 5:

**Table 5:** Financing sources and the shareholders' capitals use efficiency for the audited entities

Analyzed aspects for 2008-2011 for audited entities during 2005-2012	Audited entities typology							
	Audited entities with foreign participation in share capital				Audited entities without foreign participation in share capital			
	Static		Dynamic		Static		Dynamic	
	Medium level achieved	Optimal level	Achieved trend	Optimal trend	Medium level achieved	Optimal level	Achieved trend	Optimal trend
Equity financing	55%	[30%, 100%]	Asc	Asc	62%	[30%, 100%]	Desc	Asc
External resources involved in financing	45%	[0%, 30%]	Desc	Desc	38%	[0%, 30%]	Asc	Desc
Extent-resources procured from foreign capital	228%	<200%	Desc	Desc	534%	<200%	Asc	Desc
Efficiency of invested capitals used	5.9	-	Desc	Asc	3	-	Asc	Asc

Source: Statistical processing performed by the authors

As shown in the previous table, the audited entities with foreign participation in the share capital or those which have the share capital of local origin, achieve different levels of performance concerning the indicators taken into consideration.

#### 4. Conclusions

The two categories of audited entities that we analyzed in the present study show different evolutions (according to the involvement of foreign investments) regarding the dynamics of the main financing type, the extent to which the audited entities resources were procured out of foreign capital or the management efficiency of the administration of shareholders' capitals.

Our study shows that audited entities with foreign participation in share capital show an adequate proportion of equity capital with a positive, ascending evolution during time.

The dependence on external resources is too high, but it is important that the trend is a descending one in this case. The slightly high but reasonable proportion between the total debt and the equity capitals show a moderate risk in what concerns the choice of external or internal financing.

The audited entities without foreign participation show a reduction of the trend of resorting to external financing, preferring equity financing. In this way, the business, as well as the external capital dependency risk is reduced.

The financial involvement degree of entity shareholders is quite high. The shareholders' own resources are more efficiently used than in the case of the other audited entities categories.

On the other hand, in the case of audited entities without foreign participation in share capital, although they finance their activities to an adequate extent from their own funds, the contribution of shareholders in the business process shows a descending, negative evolution. The dependence on external financing is quite high; moreover, it shows growing tendencies in the future.

Moreover, the percentage of these external financing is much higher than the level of financial involvement of shareholders in the management of the audited entities.

Consequently, the audited entities prefer the external resources, an increasing trend (possibly indebtedness, assuming high risks) that subsequently they do not use efficiently enough given the fact that they show rotation speeds of equity more reduced than in the case of the other categories of audited entities.

In conclusion, the most stable audited entities from the financing resources point of view and the efficiency of their use, the most stable are the audited entities with foreign participation in the capital. In the case of these, the most well funded assumption is the one of continuing the activity without any prospect of reducing it.

After analyzing some credible information, of some audited financial statements, it can be found in the Romanian entities with foreign participation in the share capital, a more effective use of shareholder's capital, given that these businesses are self-financed to a lesser extent compared to the entities which have registered exclusively local capital. The management option in the field of financing is predominantly oriented towards the effective use of external resources, with the ultimate in reducing the risk of investments through a lower implication of the shareholder's capital in financing.

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# THE IMPACT OF CORPORATE GOVERNANCE ON THE RESTRUCTURING OPERATIONS OF AUDITED ENTITIES

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**Abstract:** *The study is based on public information provided by the National Trade Register Office regarding all audited entities within the county of Cluj. In accordance with the legal provisions, the audited entities must notify, in case they meet the legal requirements, if they contract financial audit jobs. The processed information refers to the connection of the management's nature and the source of the capital for these entities with the frequency of the changes occurred in the structure of the entity and/or of the social capital. Operations of such nature, considered for the period 2005-2012, refer on one side to absorption mergers, dissolutions without liquidation followed by merger, partial divisions and transfer of the audited entity's headquarters in other counties (positive operations) and on the other side to operations of liquidation, insolvency, dissolution followed by liquidation, temporary suspension of activity for a maximum period of 3 years (negative operations). Positive operations are considered by authors to have as an impact the optimization of the indicators of financial position and/or performance, and the negative operations as those unlikely to meet the principle of activity continuity. The study aims to determine whether there is a correlation between a certain type of corporate governance on one side and the frequency of the two categories of changes in the structure of the activity and/or of the social capital. Conclusions are relevant for at least two reasons: the study is exhaustive, there have been taken into consideration all the audited entities in the county of Cluj and, moreover, the analyzed period is very expansive (the last seven financial years). On the other hand, from the previous studies it appears that within audited entities there is a higher preponderance of foreign management in comparison with a more moderate foreign investment. Relevant in this respect are the findings regarding the nature of the changes in the structure of the activity and/or of the social capital within the audited entities where there is an overlap between the foreign governance and the foreign investment.*

**Keywords:** corporate governance; audited entities; restructuring operations; foreign investment; social capital.

**JEL classification:** M41, M42

## 1. Introduction and Literature Review

Regardless of an entity's size or its field of activity, the management is of utmost importance in determining the manner in which an entity can use the available resources as efficiently as possible in order to achieve the intended results and to make optimal decisions in this respect. Ensuring an effective corporate governance is a relatively new aim on the list of objectives regarding international economic convergence, also as the manner in which the audit can contribute to achieving this goal. This is a topic of great interest and debate between the two academics and

practitioners or specialists (Boța-Avram, 2012). The general objectives of the audit include verifying and subsequently ensuring that within financial statements there are no assets, liabilities, or equity which do not exist or do not belong to the entity and that the accounting principles have been respected when preparing the financial statements (Oprean, 2007). Other authors' opinions regarding audit's objectives come to support the promotion of the idea of regularity, sincerity and the true and fair view of financial statements, having as field of application everything that has a key role in determining the results and establishing the financial statements (Ghiță, 2009). These aspects are complemented by the fact that financial audit is independent of management and the Board of Directors, being performed by professional accountants in order to increase the usefulness and credibility of financial and accounting information (Florea, 2011). Therefore, the users of the information provided by financial statements rely on the financial auditors' objectivity and integrity, and also on the responsibility that comes with the profession of financial auditor (Crăciun, 2002). Corporate governance includes an additional level of responsibility: external audit, which along with internal audit are considered the pillars of corporate governance (Ghiță, 2008). For effective management of any organization, corporate governance must have an adequate level of information system which gives the relevant information in order to facilitate the decision making process (Topor, 2011). A significant role is assigned to the financial auditor which contributes in providing some reasonable guarantees for investors concerning the efficiency with which management manages the economic and financial situation (Fraser and Pong, 2009). The financial auditor must provide a reasonable assurance level on the true and fair view of the financial statements and on the fact that the company's practices and accounting policies are verified and certified (Sikka et al., 2009). On the other hand, the literature consists of general information regarding the nature and sequence of foreign or local management within Romanian entities. There is a relatively low statistically fundamented amount of information concerning the business conducted in Romania, run by foreign managers, and even less, related to a comparison between foreign and local managers' efficiency. Since the relevance of the information drawn from this kind of study is subjected to considering the entities that have a significant impact on national economy, and whose financial statements present credibility (are audited), we considered appropriate to conduct the study starting from the entities subjected to external financial audit.

## **2. Methodology**

The study is based on information submitted in September 2012 by the National Trade Register Office. They include the situation of all entities with private capital from the county of Cluj in the period 2005-2012. The data collected, processed and used in this study refers to the nature of management (foreign or local), the local or foreign participation at the social capital, the field of activity of every audited entity, and it also reveals if there were any changes in the structure of the activity and/or social capital within every one of these entities in the analyzed period. This public information was strengthened in order to analyze the effectiveness of foreign management in comparison with local management for all audited entities in the county of Cluj, based on the changes in the structure and/or social capital developed

during the last 8 years. A high frequency of such operations can have different meanings:

- positive (the operations aim to optimize the indicators of financial position and/or performance as a result of the activity subsequently developed by these entities): absorption mergers from the absorbent entity's perspective, dissolutions without liquidation followed by merger from the absorbed entity's perspective, partial divisions and transfers of the audited entity's headquarters in other counties.
- negative (the operations meet or are unlikely to meet the principle of activity continuity): liquidations, insolvencies, dissolutions followed by liquidation, temporary suspension of activity for periods up to 3 years.

Entities with foreign management were considered those entities which in the analyzed period had chosen individuals with foreign citizenship and/or legal entities associated with individuals with foreign citizenship to fulfill certain attributions, as administrators, chairman of the Board of Directors or member of the Board of Directors. The inclusion in the study in an exhaustive manner of all audited entities (in accordance with the records of the National Trade Register Office) and their monitoring for a sufficiently long period of time (8 years) confers relevance and rigor to the information drawn from the analysis of data processing.

The interdisciplinary nature of the study confers relevance to the research results. Interdisciplinarity emerges from notions related to general economy (approach of the local and foreign investments), accounting (notions related to audited entities, changes in the structure of the activity and/or social capital) and management (correlation of such data with the type of corporate governance: foreign or local). The study has significant practical implications for it reveals the dynamics of audited entities' evolution by reference to the frequency of changes in the structure of the activity and/or social capital (of positive or negative nature). This way, one could shape an overall image on the stability of the audited entities' activity, and on the perspective of activity continuity and future evolution of the audit market.

### 3. Results and Discussions

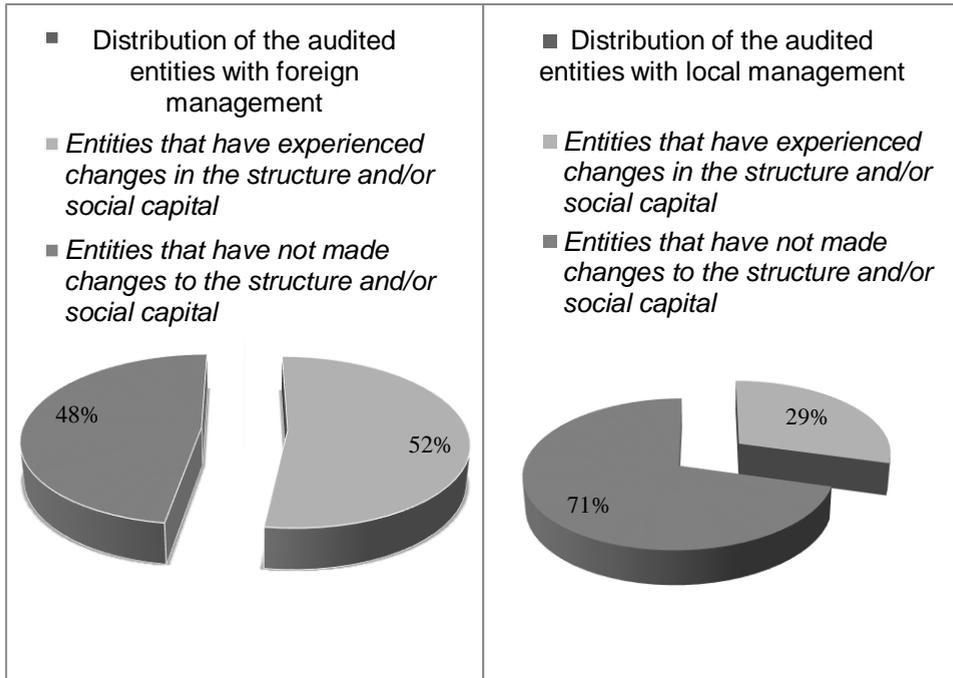
Foreign management can be identified in a significant number of audited entities in the county of Cluj (28.29%), and the percentage of audited entities which have experienced changes in the structure and/or the social capital exceeds one third (35.85%) of the entities subjected to financial audit activities in the period under consideration.

**Table1:** Distribution of audited entities correlated with the nature of management and changes in the structure and/ or the social capital

Explications	Foreign management	Local management	Total
Audited entities which have experienced changes to the structure and/or social capital	45	64	109
Audited entities which have not experienced changes in the structure and/or social capital	41	154	195
Total number of audited entities	86	218	304

Source: Statistical processing performed by the authors

The percentage of audited entities which have experienced changes is lower in the case of audited entities with foreign management (41.28%) than those with local management (58.71%). The same report of inferiority is maintained in the case of audited entities which have not registered modifications, having foreign management (21.02%) compared to those with local management from the same category (78.97%). Because the percentage of entities with foreign management is lower within the total of audited entities, it shows significance the assessment of the changes occurred in the structure and/or social capital, using the nature of management as the main criteria.



**Figure 1:** Distribution of audited entities according to the nature of management  
Source: Statistical processing performed by the authors

The audited entities with foreign management experienced changes in proportion of 52%, while a lower percentage of 48% did not experience any changes in the structure and/or social capital according to figure 1. Regarding audited entities with local management the situation is different, as the percentage of those which experienced changes is lower than 29% in comparison with the percentage of entities which did not register any changes. Therefore, audited entities with foreign management present a tendency with 79% higher than those with local management towards changes in structure and/or management. This result reveals the fact that audited entities with foreign management manifest superior dynamics in terms of adapting to economic conditions: they either experience changes which improve the financial position and performance, or these changes aim to reduce the losses of capital invested in distressed activities by terminating or reducing the activity. In

order to deepen the study and to obtain information regarding the nature of these changes, one has made a correlation of the obtained information with:

- foreign or local participation to the social capital;
- the specific field of activity of every audited entity: production, services or commerce;
- the existence or absence for every situation (in the analyzed period) of certain changes to the structure and/or social capital, and also the nature of these changes.

### 3.1. The Structuring of Audited Entities With Foreign Management

If, for the period under consideration, we approach the audited entities with foreign management in more detail according to the size of foreign investment to the social capital, the field of activity (production, services, commerce) and the nature of change operations in the structure of the activity and/or social capital, we obtain the following distribution:

**Table 2:** Distribution of audited entities with foreign management

Type of management		Foreign management													
		With foreign participation to the social capital							Without foreign participation to the social capital						
Structure of social capital		With foreign participation to the social capital							Without foreign participation to the social capital						
Field of activity		Prod		Serv		Com		Total	Prod		Serv		Com		Total
Number of entities		Yes	No	Yes	No	Yes	No		Yes	No	Yes	No	Yes	No	
		6	12	12	9	0	4	43	1	6	26	7	0	3	43
Type of change	Insolvency	2	-	2	-	0	-	4	1	-	0	-	0	-	1
	Liquidation	0	-	1	-	0	-	1	0	-	0	-	0	-	0
	Absorption merger	0	-	1	-	0	-	1	0	-	0	-	0	-	0
	Partial division	0	-	0	-	0	-	0	0	-	0	-	0	-	0
	Dissolution without liquidation-merger	0	-	1	-	0	-	1	0	-	25	-	0	-	25
	Dissolution followed by liquidation	1	-	3	-	0	-	4	0	-	0	-	0	-	0
	Temporary suspension of activity	0	-	0	-	0	-	0	0	-	0	-	0	-	0
	Transfer of headquarters	3	-	4	-	0	-	7	0	-	1	-	0	-	1
	Total changes	6	-	12	-	0	-	18	1	0	26	-	0	-	27

Source: Statistical processing performed by the authors

The audited entities with foreign management experienced changes in proportion of 41.28% in the period 2005-2012. Correlated with the existence of foreign investment, one can identify the following situations:

a) Audited entities with foreign participation to the social capital

The entities from the service sector experience a higher frequency of changes in structure and/or social capital. Thus, from the total number of entities with foreign management and foreign participation to the social capital which have registered changes, 66.67% are entities with activities belonging to the service sector (percentage of 3.95% from the total of audited entities included in the study). The percentage of entities from the service sector which experience changes in structure and/or social capital of positive nature is of 50% (absorption mergers, dissolutions without liquidation followed by merger, partial divisions and transfers of the audited entity's headquarters in other counties).

The commerce sector is the most stable in terms of changes in structure or activity of the entities included in the study.

b) Audited entities without foreign participation to the social capital

The audited entities from the service sector gather a percentage of 96.3% from the total of changes in the activity's structure experienced by the entities with foreign management and without foreign participation to the social capital (percentage of 8.55% from the total of audited entities included in the study). All these entities have exclusively recorded in the analyzed period operations considered to be of positive nature. Regardless of the structure of the social capital, the audited entities from the commerce sector did not experience any operation of insolvency, liquidation, merger, dissolution, suspension of activity or transfer of headquarters in the analyzed period.

The incidence of insolvencies within the audited entities with foreign management is of 5.81%, being higher in the case of those with foreign participation to the social capital (9.3%) in comparison with those which do not record foreign participation to the social capital (2.33%). In contrast, one can notice within the latter category a high frequency of dissolutions based on the absorption performed by the absorbing entity as a result of the process of absorption merger (92.59%). On the other hand, within the entities with foreign management and foreign participation to the social capital, there is a higher frequency of dissolutions followed by liquidation (22.22%) and of transfers of headquarters in other counties (38.89%) by reference to the overall changes in the entities' structure and social capital.

The systematization of these operations of positive nature (absorption merger, dissolutions without liquidation followed by merger, partial divisions and transfers of headquarters) and of negative nature (liquidations, insolvencies, suspensions of activity), depending on the estimated impact that it would have on audited entities, it provides a centralized image of their frequency in the period 2005-2012.

### **3.2. The Structuring of Audited Entities With Local Management**

The audited entities with local management, both those with and without foreign participation manifest a higher tendency to experience changes in the structure and/or social capital (58.72%) in comparison with the entities with foreign management (41.28%). The detailed results of the study are highlighted in the following summary:

**Table 3:** Distribution of audited entities with local management

Type of management		Local management													
Structure of social capital		With foreign participation to the social capital						Without foreign participation to the social capital							
Field of activity		Prod		Serv		Com		Total	Prod		Serv		Com		Total
Number of entities		Yes	No	Yes	No	Yes	No		Yes	No	Yes	No	Yes	No	
		0	2	2	7	0	0	11	6	34	49	97	7	14	207
Type of change	Insolvency	0	-	0	-	0	-	0	4	-	2	-	1	-	7
	Liquidation	0	-	0	-	0	-	0	0	-	2	-	0	-	2
	Absorption merger	0	-	0	-	0	-	0	0	-	0	-	0	-	0
	Partial division	0	-	0	-	0	-	0	0	-	2	-	0	-	2
	Dissolution without liquidation -merger	0	-	1	-	0	-	1	1	-	24	-	1	-	26
	Dissolution followed by liquidation	0	-	1	-	0	-	1	1	-	7	-	4	-	12
	Temporary suspension of activity	0	-	0	-	0	-	0	0	-	4	-	1	-	5
	Transfer of headquarter.	0	-	0	-	0	-	0	0	-	8	-	0	-	8
	<i>Total changes</i>	0	-	2	-	0	-	2	6	-	49	-	7	-	62

Source: Statistical processing performed by the authors

a) Audited entities with foreign participation at the social capital

The audited entities with local management and foreign participation experience the lowest percent of changes, namely 0.66% from the total of entities included in the study. Similar to the previous situations, these changes in the structure and/or social capital are registered in the period 2005-2012 by the audited entities from the service sector. The proportion of positive and negative changes is equal, each one quantifying a rate of 50% from the total of changes related to these entities' activities. Therefore, in terms of frequency regarding changes in the structure and/or social capital, the audited entities with local management and foreign participation to the social capital are the most stable, especially those from the commerce and production sectors which did not experience any kind of change during the eight years under consideration.

b) Audited entities without foreign participation to the social capital

The audited entities with local management and without foreign participation to the social capital experience the highest frequency of changes in the structure and/or social capital, namely 96.88% from the total of audited entities with local management and 20.40% from the total of audited entities included in the study. If we observe the results of the study for this type of entities taking into consideration their field of activity, it appears that the highest frequency of changes was recorded

in the service sector (79.03%), and the sectors of production and commerce have showed a greater stability in terms of changes (about 10% each).

This detail reveals that such entities which register a high frequency of changes, they either encountered significant difficulties from the perspective of business continuity, or they reorganized themselves in order to improve their activity, action imposed by the difficult economic and financial conditions. In order to highlight the trend, it is relevant to analyze the type of change experienced in the period under consideration by every audited entity with local management and without foreign participation to the social capital. In this situation (audited entities with foreign management and without foreign participation to the social capital), the changes of positive nature (absorption mergers, dissolutions without liquidation followed by merger, partial divisions and transfers of the audited entity's headquarters in other counties) have registered a high frequency (58.06%).

The frequency of insolvencies in the period of time 2005-2012 within the audited entities with local management is of 3.21%, lower than the frequency of insolvencies within the audited entities with foreign management. One can observe within these entities both a necessity and also a high ability of reorganization, emphasized by the high frequency of positive operations, of changes in the structure and/or social capital in general, and also of the dissolutions without liquidation followed by merger in particular (these entities represent 42.19% from the total of changes registered within this sub-category, respectively 12.56% from the total of entities with local management and without foreign participation to the social capital).

### **3.3. The Typology of Corporate Governance Decisions**

The centralization and correlation of the study's parameters (nature of management, foreign investment, field of activity - production, services, commerce - and also the preponderant typology of changes in the entity's structure and/or the social capital) facilitates the process of relatively emphasizing the manner in which corporate governance has reacted in the period 2005-2012 concerning the management of the analyzed entities, namely:

- defensive managerial decisions, of adaptation to the difficult economic and financial conditions sustained by a high frequency (for a certain type of management and field of activity) of the following operations: merger, liquidation, insolvency, dissolution, suspension of activity and transfer of headquarters to another location;

- offensive managerial decisions to increase the audited entities' performance, emphasized by the high frequency of the operations of positive change in the structure and/or social capital: absorption mergers, partial divisions, dissolution without liquidation followed by merger, transfer of the entity's social headquarters to another location;

- neutral management policies, of maintaining the audited entities' stability, highlighted by a relatively small number of decisions aiming operations of change in the structure and/or social capital previously mentioned;

- a relatively low incidence of insolvencies;

**Table 4:** The typology of corporate governance decisions of the audited entities in the light of changes in the structure and/or social capital

Parameters	Foreign management						Local management					
	With foreign participation to the social capital			Without foreign participation to the social capital			With foreign participation to the social capital			Without foreign participation to the social capital		
	Production	Services	Commerce	Production	Services	Commerce	Production	Services	Commerce	Production	Services	Commerce
Defensive decisions, ability to adapt to difficult conditions (high frequency of operations)		x			x			x			x	
Offensive decisions, to increase the performance (high frequency of positive operations)		x			x			x			x	
Neutral managerial policies which aim the activity's stability (relatively low frequency of operations)			x			x	x		x			
The relatively low incidence of insolvencies			x		x	x	x	x	x			

Source: Statistical processing performed by the authors

#### 4. Conclusions

After analyzing the previously centralized data, one can draw some estimations regarding the audited entities' tendency concerning their activity, based on the corporate governance decisions. The audited entities belonging to the production sector experience the lowest frequency of operations such as those previously mentioned, except the audited entities with local management and without foreign participation to the social capital. Thus, regardless of the management's nature and the existence or absence of foreign investment, the audited entities from the service sector had the higher dynamics in terms of management decisions regarding operations which aim to change the structure of the activity and/or the social capital:

- in this sector, there are both defensive decisions (high frequency of all operations) and offensive decisions (higher frequency of the operations considered of positive nature);

- from this point of view, the aggregate evolution of these entities' performance can be mixed: performance increase for some entities, but also decrease for others;

- starting from these premises, the corporate governance decisions aim either to diminish losses and come with efficiency measures, or to increase the

performance indicators and less likely to constantly maintain the financial and economic parameters that measure performance;

-insolvency has a lower incidence than the production sector and higher than the commerce sector.

In general, audited entities from the commerce sector have a relatively low frequency of changes in the structure of activity and/or social capital. It is significant that insolvency has the lower incidence within this field of activity. The decisions to increase the performance through the high frequency of positive operations are specific to the service sector, these being adopted equally by the foreign or local management, regardless of the nature of participation to the social capital. The largest number of insolvencies is reflected within the audited entities with local management and without foreign participation to the social capital.

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## CONVERGENCE OF INTERNATIONAL AUDIT STANDARDS AND AMERICAN AUDIT STANDARDS REGARDING SAMPLING

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**Abstract:** *Sampling is widely used in market research, scientific analysis, market analysis, opinion polls and not least in the financial statement audit. We wonder what is actually sampling and how did it appear? Audit sampling involves the application of audit procedures to less than 100% of items within an account balance or class of transactions. Nowadays the technique is indispensable, the economic entities operating with sophisticated computer systems and large amounts of data. Economic globalization and complexity of capital markets has made possible not only the harmonization of international accounting standards with the national ones, but also the convergence of international accounting and auditing standards with the American regulations. International Standard on Auditing 530 and Statement on Auditing Standard 39 are the two main international and American normalized referentials, referring to audit sampling. This article discusses the origin of audit sampling, mentioning a brief history of the method and different definitions from literature review. The two standards are studied using Jaccard indicators in terms of the degree of similarity and dissimilarity concerning different issues. The Jaccard coefficient measures the degree of convergence of international auditing standards (ISA 530) and U.S. auditing standards (SAS 39). International auditing standards and American auditing standards, study the sampling problem, both regulations presenting common points with regard to accepted sampling techniques, factors influencing the audit sample, treatment of identified misstatements and the circumstances in which sampling is appropriate. The study shows that both standards agree on application of statistical and non-statistical sampling in auditing, that sampling is appropriate for tests of details and controls, the factors affecting audit sampling being audit risk, audit objectives and population's characteristics.*

**Keywords:** sampling, convergence, IAS 530, SAS 39

**JEL classification:** M42

## 1. Introduction

Sampling is widely used in market research, scientific analysis, market analysis, opinion polls and not least in the financial statement audit. We wonder what is actually sampling and how did it appear?

At first, audit included testing and verifying all elements of a class of transactions or account balance, over the entire audited period. The owners of these companies were interested in discovering major fraud and mistakes in financial statements.

The invention of computers and database servers resulted in developing markets. It became impossible for auditors to check and test all data units from the populations. Globalization has encouraged the apparition of multinational companies, creating the possibility for all companies to buy raw materials from different continents, to use cheaper labor and sale their products to global markets.

Companies become more and more complex, so the number of users of financial statements increased also. Not only associates were interested in the correct presentation of the financial statements, but also creditors seeking to recover money, potential investors, employees, customers, suppliers, the public, government (figure 1, figure 2).

Since the late nineteenth century, sampling is used for checking the accounting postings (Moyer, 1951).

The Englishman Lawrence R. Dicksee, (Dicksee, 1907), was the first that raised the issue of an effective audit. In 1907, he stated that a full audit practice or a balance sheet audit depends to some extent on the internal controls of the entity audited. This idea was reinforced by American researcher Montgomery, a decade later.

In 1917 the Federal Reserve Bulletin prints a set of audit procedures that mention the sampling method, referring to the selection of "some inventory items".

AICPA, American Institute of Certified Public Accountants, published in 1929 a set of auditing standards called "Verification of Financial Statements", which emphasizes that the existence of effective internal controls justify the performance of fewer other audit procedures. Same institute, in 1956, established a committee aimed to study the problem in audit sampling, the Committee highlighting the need for extension of the new audit technique.

In the book "Statistical Auditing" (Roberts, 1978) the author explains the theory of sampling, stating that the error identified in a population should be smaller than the tolerable error.

The first standard studying the method appeared in America in 1981 and was called "Audit Sampling". This standard was completed by Amendment 111 in 2002. IAASB issued in 1997 a standard with the same name.

According to the Explanatory Dictionary of Romanian Language in 2002, the verb "to sample" has three meanings: 1. compare the sample with a standard, 2. choose persons to be statistically representative for a survey, 3. taking samples (1) at predetermined intervals (<fr. échantillonner). Sampling becomes "the action to sample".

Descriptive statistics studied sampling, which is a basic concept of this science, along with statistical population, statistical unit and sample.

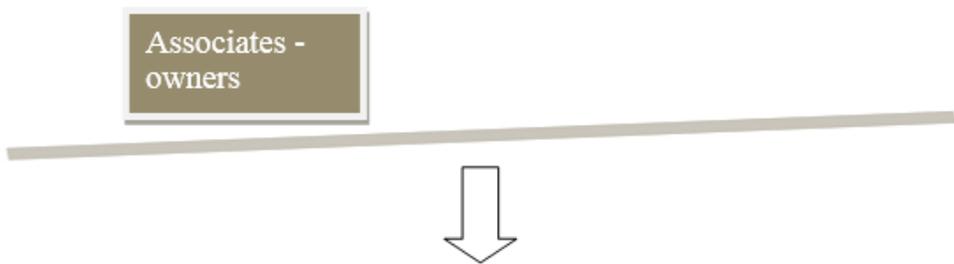
Statistical population represents a set of simple or complex elements, which have one or more essential common characteristics, characteristics attributable to the elements and to the whole population. (Florea at al., 1985)

Statistical unit is the component element of the statistical population, on which it will be performed direct observation. Statistical unit is the original carrier of information

or the logical subject of statistical information. Due to the variety of aspects in which may be presented the statistical unit, it comprises a precise definition, which excludes the possibility of different interpretation by observers and so any error that may prejudice the investigation value. (Buiga, 2003)

The sample is a subset of a statistical population, constituted based on well established criteria. (Buiga, 2003)

Audit sampling involves, according to International Standard on Auditing 530, Audit Sampling, performing audit procedures to less than 100% of the component items of a class of transactions or account balance.



**Figure 1:** First users of audit reports  
Source: author's projection



**Figure 2:** Users of audit reports nowadays  
Source: author's projection

## 2. Case Study

The preparation of European countries for integration into the European Union imposed the harmonization of national accounting and financial statements with those used in EU countries and the adoption of international accounting standards in this area. Once national accounting standards began to be harmonized with international legislation, it became mandatory the harmonization of national and international audit standards.

Economic globalization and complexity of capital markets has made possible not only the harmonization of international accounting standards with the national ones, but also the convergence of international accounting and auditing standards with the American regulations.

This process of harmonization and convergence is achieved in stages. The first step involves providing a legal framework that will comprise the new accounting and auditing regulations. The second step is to ensure gradual implementation of the new legislation on various categories of economic agents until the application of these regulations in the whole economy is achieved.

International Standard on Auditing 530 "Audit Sampling" was prepared by the International Auditing and Assurance Standards Board in 1997. In the United States, Auditing Standards Board issued Statement on Auditing Standards number 39 in 1981, a statement on auditing standards studying the audit sample.

International and American standard setters are aware of the need for uniform audit standards in a globalized market. This questions the ISAs convergence with U.S. regulations. Our intention is to study the degree of convergence of international standards with U.S. standards referring to audit sampling, using Jaccard coefficients.

First subject analysis the recognized sampling methods. The two regulations recognize both the non-statistical and statistical method of sampling, statistical method assuming statistical selection and availability of special programs, non-statistical method involving the use of professional judgment.

We have considered the way audit sample was selected and what factors influence sampling, both standards indicating the importance of population characteristics, objectives and audit risk selection. In selecting a proper sample all the population's elements should have an equal chance of being chosen.

Under both international and American regulations misstatements identified in the selected sample could refer to tolerable errors, anomalies or material misstatements. Tolerable errors are errors that projected to the entire population do not affect the accuracy and fair view of the financial statements. Anomalies should be carefully assessed, yielding conclusive evidence that they are not representative for the entire population. For material misstatements, adjustments must be proposed to the financial statements.

The last topic studied is the case sampling is appropriate. International and U.S. auditing standards emphasizes that the two cases for which sampling is appropriate are tests of details and controls.

Fontes is the first researcher to use Jaccard coefficients as a means of measuring the degree of formal harmonization, in his book *Measuring Convergence of National Accounting Standards with International Financial Reporting Standards* in 2005. The Jaccard coefficient measures the degree of convergence of international auditing standards (ISA 530) and U.S. auditing standards (SAS 39).

The similarity degree indicates the degree to which the two standards are similar for issues considered and is calculated according to the formula:

$$S_{ij} = \frac{a}{a+b+c}$$

The degree of dissimilitude is the difference between maximum similarity (1) and similarity identified, highlighting the differences between the two regulations.

$$D_{ij}=1-S_{ij}$$

Following the calculations from table 1 it can be observed that the two regulations have a maximum degree of similarity (100%), the degree of dissimilitude is zero. The study shows that both standards agree on application of statistical and non-statistical sampling in auditing, that sampling is appropriate for tests of details and controls, the factors affecting audit sampling being audit risk, audit objectives and population's characteristics.

### 3. Conclusions

Audit sampling involves the application of audit procedures to less than 100% of items within an account balance or class of transactions. Nowadays the technique is indispensable, the economic entities operating with sophisticated computer systems and large amounts of data.

International Standard on Auditing 530 and Statement on Auditing Standard 39 are the two main international and American normalized referentials, referring to audit sampling. The two standards are studied using Jaccard indicators in terms of the degree of similarity and dissimilarity concerning different issues. The Jaccard coefficient measures the degree of convergence of international auditing standards (ISA 530) and U.S. auditing standards (SAS 39).

International auditing standards and American auditing standards, study the sampling problem, both regulations presenting common points with regard to accepted sampling techniques, factors influencing the audit sample, treatment of identified misstatements and the circumstances in which sampling is appropriate. The study shows that both standards agree on application of statistical and non-statistical sampling in auditing, that sampling is appropriate for tests of details and controls, the factors affecting audit sampling being audit risk, audit objectives and population's characteristics.

**Table 1:** The similarity degree between International and American standards regarding audit sampling

Topics	ISA 530	SAS 39	Computation of Jaccard coefficient	
			$S_{ij} = \frac{a}{a+b+c}$	$D_{ij} = 1 - S_{ij}$
<b>1. Sampling methods</b>				
1.1 Statistical sampling	1	1	$S_{ij1} = 1$	$D_{ij1} = 0$
1.2 Non-statistical sampling	1	1		
<b>2. The factors that influence audit sampling</b>				
2.1 Population's characteristics	1	1	$S_{ij2} = 1$	$D_{ij2} = 0$
2.2 All the elements from a population have equal chances to be selected	1	1		
2.3 Audit objectives	1	1		

Topics	ISA 530	SAS 39	Computation of Jaccard coefficient	
2.4 Audit risk	1	1		
<b>3. Treatment of identi misstatements</b>				
3.1 Tolerable errors	1	1	Sij3=1	Dij3=0
3.2 Anomalies	1	1		
3.3 Material misstatements	1	1		
3.4 Not mentioned	0	0		
<b>4. Cases in which audit sampling is appropriate</b>				
4.1 Details tests	1	1	Sij4=1	Dij4=0
4.2 Controls	1	1		
			(Sij1+Sji2+Sij3+Sij4)/4=1	(Dij1+Dij2+Dij3+Dij4)/4=0

Source: author's projection

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# STUDY ON THE PERCEPTION OF THE ORGANIZATIONAL PERFORMANCE IN ACCOUNTING AND AUDIT FIRMS

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**Abstract:** *The environment in which the accounting and auditing firms operate is changing. The economic, technological and financial contexts directly affect their business. In addition, the customers have become more fastidious in terms of the nature, the speed and the precision of the required services. All these developments force the firms to improve their organization by incorporating appropriate performance measurement systems. The objective of this paper is to examine how the organizational performance it is perceived in accounting and auditing firms. In this sense, we checked the perspectives of the balanced scorecard model in a Big Four office and in a small office. The sample consists of 10 Romanian auditors. Eight of auditors are working in one of the Big Four. To achieve this study, were selected only managers. The other two auditors operate in a small office, they being, at the same time, also associates. The sample is homogeneous in terms of the training, the sector of activity and experience. To enable an objective analysis of results, the name of the offices will not be made public. The results showed that in the Big Four office all four perspectives of the balanced scorecard model are checked, while in the small office the number of perspectives is lower, because learning is informal and not materialized. On this perspective, the Big Four office, periodically analyzes the results and try to identify the causes that led to differences in the objectives set. Possible causes that were invoked: overloading of the auditor, additional works, not included in the letter of assignment and the lack of competence of the auditor. Regarding the internal perspective, each office has its own mode, but obviously the Big Four office has human, logistics and financial resources more important, that enabling it to keep its reputation in the market. Instead, the financial goals are the same for both offices analyzed: profitability increasing.*

**Keywords:** accounting and audit firms, corporate performance, balanced scorecard

**JEL Classification:** G 34, M14, M42

## 1. Introduction

Accounting and audit firms must face permanent development challenges such as the evolution of the economic context, characterized by the competition increasing, instability and globalization, as well as the change of the benefits requested by customers, in terms of nature, speed and accuracy. In such a situation, aspects like strategy and performance measurement becomes extremely important. A performance-oriented strategy means a management with technical and operational rationality centered on customer. The performance of an accounting and auditing firm should be seen as a result of a causal process, relative to a chosen context

based on strategy (Lebas, 1995) or, in other words, as an achievement of organizational objectives (Bourguignon, 1996). It is measured not only by optimal use of production tools, but also through the ability to create and provide services to customers. In addition, operational information must be supplemented by information of a strategic nature, which allows taking into consideration the environmental trends, the weaknesses and the strengths of the office (Carassus, 2006).

Therefore, in order to ensure the sustainability and to benefit from potential opportunities in terms of new customers and services, accounting and auditing firms are forced to acquire a flexible structure, to change their behaviors and to integrate new skills (Bailly-Masson, 2000). In this context, it is worth reflecting on how to track performance in the domain of accounting and auditing services.

The objective of this paper is to examine how it is perceived the organizational performance in accounting and auditing offices. To achieve this objective, were realized semi-directive interviews with Romanian auditors who are working in two offices of different sizes. They were interviewed about the size and performance measurement tools. For this purpose, we used the balanced scorecard model of Kaplan & Norton (1992).

The rest of the paper is organized as follows: the first section provides information about the multidimensional nature of organizational performance, the second section summarizes the literature on organizational performance, the next section presents the study of how it is perceived the organizational performance in Romania; the paper concludes with conclusions and future research directions.

## **2. A Multidimensional Conceptualization of Organizational Performance**

In contemporary society there is a real cult for performance. This concept is used almost systematically in an implicit and explicit manner. However, its content varies from one specialist to another. In other words, performance is a social construction that takes many meanings as the number of individuals or groups who use it (Allouche & Laroche, 2005; Boudabbous, 2011). In relation to stakeholder theory (Freeman, 1884), performance can be interpreted according to the different actors that make up the stakes or interests in such entity (Gilbert & Charpentier, 2004). For some people, accounting and financial dimension is predominant, while others are interested in consumer-product dimension, socio-political dimension or employee dimension (Le Louarn & Wils, 2001).

The diversity of the performance indicators used in the literature show that the performance is covering concepts whose meaning is often contextual and leads to numerous interpretations (Allouche et al., 2003). On the same line, Chrétien et al. (2005) warns that the performance contains a set of complementary and sometimes contradictory parameters, which does not have the same importance, even if the economic dimension remains dominant. As a result, the performance appears as a compromise rather composed of optimized results than of maximized results, the firm's perennially being the horizon line to which converge the eyes of the stakeholders (Montebello, 1976).

According to Venkatraman & Ramanujam (1986), the organizational performance includes besides the financial performance, measured by indicators such as profitability, sales, market value and operational performance. For the latter the measurement indicators used are: the social image of the organization, the marketing effectiveness, the novelty and the quality of the products etc.

Raad (2004) considers the organizational performance a multidimensional and complex concept, not limited to financial results, for its evaluation being necessary the reference to numerous organizational results, both internal and external. Also, Bourguignon (2000) defines the performance as the achievement of the organizational objectives, whatever the nature and the variety of the objectives.

She designates, in the same time, a result, an interpretation of that result (success or failure) and an action that generated it (Bourguignon, 2000). Furthermore, the performance is an evolving concept, because the factors that can contribute to the success of an organization in a process of innovation may become incompatible with the factors required by a development phase (Boudabbous, 2011). In addition, some combinations of human, technical, organizational and financial factors prove effective in a given context and less effective in others (Carrière & Barrett, 2005).

Researchers warn on the need to clarify and validate the definition of performance (Becker & Gerhart 1996; Rogers & Wright 1998), because an inadequate definition often raises problems of evaluation. Practitioners seem to use the term of organizational performance to describe a wide range of measures (Heffernan & Flood 2000). Theorists, also, have proposed various conceptual frameworks for measuring the organizational performances. Of these, the most commonly invoked are the organizational effectiveness model of Morin et al. (1994) and the balanced scorecard of Kaplan & Norton (1992).

The organizational efficiency model of Morin et al. (1994) is a court that makes a person or a group of persons on an organization, particularly on the activities, outputs, outcomes or on the impact he expects from it. The model makers have identified four dimensions of the organizational performance, defined by criteria and indicators. These are: the organization's sustainability (the systemic dimension), the economic efficiency (the economic dimension), the value of the human resources (the social dimension) and the legitimacy of the organization to the external groups (the political dimension). According to these three authors, the performance criteria must be specific and organizational characteristics. Choosing the measurement indicators raises some problems. The balanced scorecard of Kaplan & Norton (1992) is a balanced mix of both external indicators and internal indicators, with regard at processes, innovation, education and growth. They associate outcome indicators, which are the effect of efforts previously employed with indicators which allow the increasing of the future performance. They also combine objective and subjective indicators contributing to the performance achievement.

### **3.Literature Review on Organizational Performance**

The literature on organizational performance is extremely rich. But most recent research is concerned with the communication of the organizational performance. Thus, some studies have examined trends in communicating the organizational performance. In principle, it is accepted that transparency in communicating the organizational performance is essential for the proper functioning of the capital markets, jobs, goods and services (Aerts et al., 2007). The financial scandals of the last decades have shown that, when reduced reliability of the information provided by the firm, the loss of the value beyond the shareholders affects other stakeholders (Cormier et al., 2009). Furthermore, an incomplete communication prevents the adoption of corrective action by the various parties involved and can accelerate the destruction of the enterprise value. For this reason, the regulations from some

countries have included clauses that would guarantee that the performance disclosure of the firms is credible, transparent and ethical.

Other studies have considered the developments in modern communication means and pursued the measuring of organizational performance communication on the internet. Ubiquity of the internet has pushed firms to reconsider their reporting strategies to take advantage of the flexibility that the internet offers them in terms of presentation and content of the Annual Reports (Ajinkya et al., 2005). In addition, on the internet can be provided much more information than through traditional means, even outside the reports (Cormier et al., 2009), which makes the relationship between firm's management and partners to be more direct, more dynamic and interactive (Hodge et al., 2004).

There are also studies that were interested in the validity and the interest of the measurement of the determinants factors of organizational performance communication. Thus, Cormier et al. (2009) showed that managers take into account the interests of certain parties involved, such as shareholders, in establishing communication strategies of the organizational performance. Beyond the information needs of shareholders, the managers' decision to communicate certain information about performance is likely to be influenced by the compromise between reporting direct costs and benefits of such communications (Scott, 1994). The analysis of the relationship between costs and benefits of the communication of the organizational performance does not take into account, however, explicitly, the differences between companies in terms of corporate governance mechanisms. However, it is likely that a company's governance structure still affects the organizational performance communication.

The analysis of the determinants factors of the organizational performance communication is based on the literature about the balanced scorecard (Kaplan & Norton, 1996; Marston & Pole, 2004, Ittner & Larcker, 1998). Choosing the variables in different studies is based on the premise that there is an association between the organizational performance communications, on the one hand and the considerations of financial markets, the corporate governance mechanisms and the firms' exposure to the economic environment, on the other hand. The indebtedness, the available cash flows, the beta systematic risk, the concentration of capital degree, the board independence, the firm size, or the number of employees are just some of the variables used to identify the determinants of organizational performance communication.

Finally, there are studies dealing with relevance of the information communications regarding the organizational performance for firms' earnings assessing. Because shareholders assume the residual financial risk and they are not involved in current operations, they are most interested in communication policies and practices of the firm. Based on these communications, shareholders appreciate the value of the firm and decide the retention or the sale of shares. Previous studies suggest that investors appreciate the value of a firm, based on the financial and non-financial performance (Banker et al. 2000).

#### **4. Methodological Aspects: Sample Selection and Results**

##### *Sample Selection*

The sample consists of 10 Romanian auditors. Eight of auditors are working in one of the Big Four. In that office there is a hierarchy of employees in several degrees, depending on the operational responsibilities and activities. To achieve this study,

were selected only managers. The other two auditors operate in a small office, they being, at the same time, also associates. The sample is homogeneous in terms of the training, the sector of activity and experience. To enable an objective analysis of results, the name of the offices will not be made public.

*The Model Presentation*

In this study, we used the balanced scorecard model of Kaplan & Norton (1992). This represents "a management system that can channel the energies, skills and knowledge specific to individuals throughout an organization, in order to achieve long term strategic goals" (Kaplan & Norton, 1996).

In contrast to traditional systems performance assessment, the balanced scorecard model is based on four distinct perspectives (Kaplan & Norton, 1992):

- learning and growth: the focus is on active individuals, in organization, and on infrastructure. An appropriate investment in these areas is critical to ensuring long-term success;
- internal perspective: the focus is on the performance of the essential internal processes, which are the engine of the organization. Improving these processes is considered an indication of future financial success of the company;
- customers: to transform the processes improving into financial success, companies must ensure customer satisfaction: this approach allows the company to remain focused on the needs and customer satisfaction;
- financial perspective: this perspective provides measurement results that the company provides to its shareholders;
- the four perspectives pursued simultaneously offers a nuanced view on current and future business performance.

*Data Collection*

The prospects of the balanced scorecard model (Kaplan & Norton, 1992) have been verified in the context of the survey. In this regard, have been realized semi-directive interviews of approximately 45 minutes, with the 10 auditors from the sample.

*Data Analysis and Interpretation of the Results Obtained*

The information noted during the interview and the documents provided by the respondents were analyzed in terms of content. To describe the instruments operating in the offices was made an analysis grid. The results obtained are as follows:

<b>Issues pursued on four perspectives</b>	<b>Results</b>
Learning and growth: actions that promote continuous improvement	In Big Four office, the learning is formalized. Periodically are reviewed the results and checked if the quantitative and qualitative objectives have been achieved. They identify the causes that generate differences. If there is a technical incompetence of the auditor's, the office may establish a training program for it. In the small office, however, the learning is in an informal way and not materialized.
Internal perspective: the processes by which the office express its	In Big Four office is implemented an information system on customers, in solving a case, involving multiple people. There are informatic tools that allow

priorities to promote customers	smooth functioning of the process. In the small office, was a workspace that enables to respond quickly to customers. In addition, efforts are made to always dispose of all appropriate documentation of the office's needs.
Customers: strategic actions applied to satisfy customers	In the Big Four office the policy is that in order to maintain and develop its portfolio of customers, the auditors should be very careful about the quality of services. This quality is measured by customer satisfaction, customer age, ability to attract new customers, loss of customers, etc. In the small office, the customer perspective translates into: direct contact with clients, ability to listen and understand customer needs, good reputation and customer satisfaction in terms of response time and quality of the provided services.
The financial perspective: the extent to which the organization of the office allowed financial goals achievement	In Big Four office, there are settled quarterly financial targets to achieve a good financial return. These are checked monthly. The small office referred to both files and entity profitability.

### 5. Conclusions and future research directions

To meet the economic, technological and financial challenges, the accounting and auditing firms, as well as other entities from the service sector, can improve their organization by incorporating some appropriate performance measurement systems. In literature there are many models developed for performance measurement. Choosing the appropriate model depends, however, on the entity's objectives.

This paper examines how it is perceived the organizational performance in accounting and auditing firms. In this sense, we checked the balanced scorecard model perspectives (Kaplan & Norton, 1992) in a Big Four office and in a small office. The results showed that in the Big Four office, all the four perspectives of the balanced scorecard model (Kaplan & Norton, 1992) are checked. In the small office the number of perspectives is lower, because the learning is an informal way and not materialized. On this perspective, the Big Four office, periodically analyzes the results and try to identify the causes that led to differences in the objectives set. Possible causes that were invoked: overloading of the auditor, additional works, not included in the letter of assignment and the lack of competence of the auditor. Regarding the internal perspective, each office has its own mode, but obviously the Big Four office has human, logistics and financial resources more important, that enabling it to keep its reputation in the market. Instead, the financial goals are the same for both offices analyzed: profitability increasing.

There are still many paths of research in this area. Thus, the sample could be extended to employees in several offices and might attempt a quantitative validation of the model. In addition, we can try an extension of the model by adding additional axis like the strategic vision or the external groups' legitimacy.

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# ROLE OF INTERNAL AUDITING IN RISK MANAGEMENT IN THE PUBLIC SECTOR AND LOCAL ENTITIES – CASE STUDY BIHOR COUNTY

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**Abstract:** *This exploratory study of the internal audit in the public sector in function, points out the need for the involvement of public sector entities, showing that in its role has traditionally focused mainly on evaluating internal control and not on the process of risk management and corporate governance. The objective of this study is to analyze the role of the internal auditing in risk management in public institutions from Bihor County. The method chosen is the research is based on questionnaire and the analysis of the institutions has been divided into two categories, so that, when the sample was taken in consideration, the likelihood that local public institutions of Bihor County have organized the public internal audit activity. Based on responses from 49 entities from public sector, the result of the study show us that the public internal auditors know they can play an important role in the risk management, but there is a number of other activities which must be conducted within the organization. So, they tend to understand the concept of risk management and risk management process, where it is carried out, and of the role they can play in improving and activity, however, issues of disposable incomes allocated to activity, and enough personnel specializing in the field, as well as a lack of interest of management to increase the efficiency and profit of the public internal audit activity, are issues that impede performance and risk management.*

**Keywords:** Auditing, Public entities, Internal Auditing;

**JEL classification:** M40, M42

## **1. Introduction and motivation of the study**

Internal audit provide constant review and appraisal of the systems and procedures introduced by the management with the intention to enable the management to control and utilise their resources properly and effectively (Mu'azu Saidu Badara and Siti Zabedah Saidin, 2012:404). In recent years, enterprise risk management has received a wider attention (Beasley, Clune & Hermanson, 2006) and become an agenda in both public and private sectors (Wood, 2009). Economic recession Romania is facing at the moment generates imbalance in public entities, progress in limiting public resources, low quality of service, the multiplication of risks and uncertainties, as well as the lack of performance. All these reasons take us to the study of the internal audit in the public sector, because the public entities have to change the traditional role of the audit (Deloitte, 2011), from evaluating internal control to the process of risk management and corporate governance.

It used to be that internal auditing in the public sector served as a simple administrative procedure comprised mainly of checking accuracy of transactions, pre-payment verification and control, counting assets and reporting on past events to various types of management, but in recent times, governments moving toward higher levels of transparency must demonstrate accountability in the use of public money and efficiency in the delivery of services. Larger and more complex operations demand greater competency and professionalism from internal auditors to minimize and manage risk (Deloitte, 2011).

In Belgium, Sarens G. et al (2010) makes an analysis that provides an in-depth analysis of risk management and internal control practices within Belgian social security public institutions (sspi). The findings show that: risk management and internal control are not highly developed; internal control is more developed than risk management; and risk management concepts like risk identification and evaluation are part of internal control, rather than internal control being part of risk management. Also concluded the fact that the traditional internal control philosophy (focusing on conformance) is more wide-spread than the recent risk management philosophy (focusing on performance) could be a reason why the performance requirements of the SSPI are not met.

With respect to internal audit's involvement in the identification and assessment of risks in the local public sector and public institutions, Ernst& Young (2008) has achieved a relevant study on a sample of 400 local authorities and 125 public institutions. The study was based on the questionnaire which was sent to these entities and had questions about the governance of the public sector, the trends of organizations with regard to the risks and identify significant areas, the stage of implementation of internal control. The answers about the responsibilities of the internal audit were the following:

**Table 1 The activities of the internal audit function in the public sector entities and public global institutions.**

Types of activities	Public institutions		Local public sector	
	Systematically %	Often %	Systematically %	Often %
Evaluation of internal control	47	32	20	44
Testing the effectiveness of procedures	40	30	17	44
Risk identification	32	16	6	27
The audit of the financial statements	26	42	15	43
Audit of information systems	25	38	8	22
Audit of subordinate entities	13	31	41	38
Formulating procedures	5	26	25	43

Types of activities	Public institutions		Local public sector	
	Systematically %	Often %	Systematically %	Often %
Evaluation of public policies	-	6	21	36
The consistency of internal control	-	21	6	26

Source: Ernst & Young (2008)

The survey shows that the identification and assessment of weak points in terms of risks is subject to regular internal audit assignments in a percentage of 32% in public institutions and local entities, 6% in the public sector. Also testing the effectiveness of auditing procedures, information systems, and financial information are rarely subject to public internal audit missions, and missions with an indirect internal audit (writing manuals of procedures, internal consistency checks) are often subject to choice. The assessment of the internal control and audit of subordinated entities about the systematic and common responsibilities of the internal audit in most of public entities (79%, 64%, 42%, 79%), demonstrates that the internal audit assignments are still traditional.

Another poll conducted by Deloitte (2009) shows improper risk management in the public sector. The survey was conducted in 200 government departments in 28 States, according to officials, 48 percent of the public believes that the world of risk management is one of many challenges met by the financial departments of public entities.

The implementation of relatively recent internal audit in the public sector in Romania and financial resources will decline in economic conditions, leading to the premise to conduct an empirical study to identify to what extent public audit, there are participating, improves and helps to smooth risk management in public entities in Romania.

Therefore, regarding the previous researches (Rudasingwa Justin, 2006; Mu'azu Saidu Badara and Siti Zabedah Saidin, 2012) we proposed as objective the analysis of the role of internal audit in risk management of the local public institutions in Bihor County.

The analysis was conducted in order to obtain information regarding:

- The internal auditor's role in risk management (Anuntaakalukul A., 2010);
- The activities undertaken with regard to risk management and the internal audit risk management (IIA, 2011);
- The role of public audit on the identification and assessment of risks (Ahmad N. et al, 2009);
- Internal audit skills to cope with the development of risk management (Matthew Leitch, 2004);
- Lack of motivation activities relating to internal audit and risk management (IIA, 2011).

We believe that all replies to questionnaires being released, would help us to form an opinion on the role of internal audit in public institutions and risk management, and to determine the reasons for these processes are not carried out.

The study undertaken focused on public institutions that operate locally and use of public financial resources. Local government institutions are taken into account in our analysis are those in the Bihor County, the County Council and town councils of municipalities, towns and communes, that the law derives income and use budgetary appropriations.

## **2. Research methodology**

The objective of our study is to analyze the role of the internal auditing in risk management in public institutions, at local level. As the current research, there has been a positive-type research, and in doing so (Ionaşcu I., 2003:76) the positive approach in accounting assumes that any theoretical formulation cannot be valid unless it is verified empirically, by confronting the hypothesis with the facts.

The method chosen in the research is based on questionnaire, and Francois de Singly (1998:21) states that the survey-based questionnaire serves the explanatory data, and as a form of research we opted for the statistical survey.

## **3. The construction and presentation of sample review**

The analysis of the institutions has been divided into two categories, so that, when the sample was taken in consideration, the likelihood that local public institutions of Bihor County have organized the public internal audit activity.

From the analysis of the sites linked to the Mayor's and the Board of Auditors 'Bihor report on 2010, we found that public internal audit activity at the level of municipalities is not organized in the form of individual departments, it unfolds as an outsourced. So, using a single questionnaire for both categories of institutions that do not provide relevant answers and would have hindered the process of gathering information, which we consider relevant to their classification depending on the organization of public internal audit division.

As a result, the sample is comprised of two categories of institutions:

- class I, consisting of the County Council and town councils of municipalities in Bihor: Oradea, Beiuş, Salonta and Marghita; and the mayoralties of cities in Bihor County, namely: Aleşd, Nucet, Săcueni, Stei, Valea lui Mihai and Vaşcău; a total of 11 entities;

- class II, consisting of the municipalities of the 91 municipalities found in the County. The data are recorded and reported by the Directorate General of public finances Bihor, and the sample chose a representative geographical distribution. For the two categories of institutions we have realized 2 questionnaire containing questions relevant to the work of risk management in the context of public internal audit division and the respondents are internal auditors of public employees in selected public institutions (where there is organized the public internal audit office) and unemployed people in the management of institutions (where the public external audit service is outsourced). The questionnaires were sent electronically and listed.

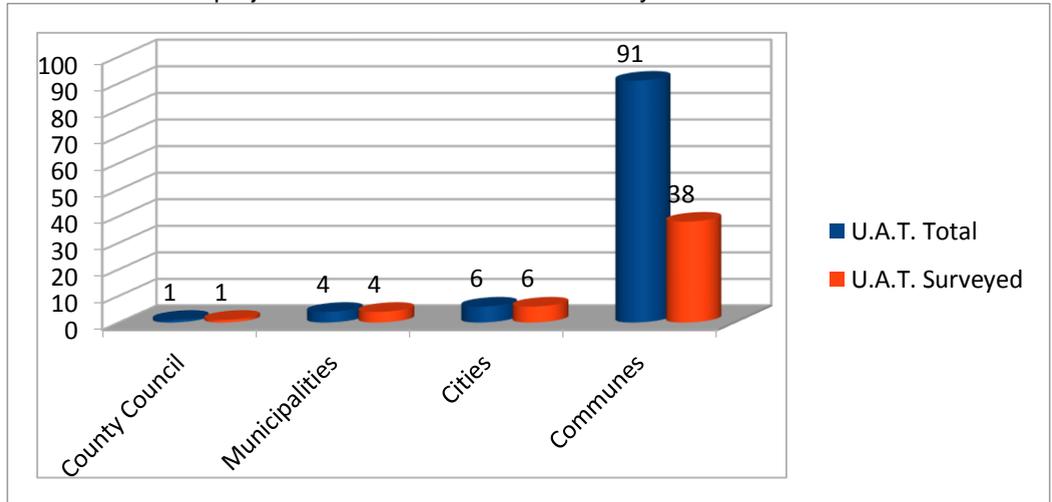
As a result of the questionnaire, we obtained a total number of 49 responses, representing a response rate of 48.03 %. By clicking on the two distribution categories, the response rate for the first category is 100%, and for category II the response rate is of 41.75 %.The non-response rate is higher than that of the responses and we think the reasons are the lack of system of public internal audit, including outsourced, or negative perceptions, distrust, on opinion polls.

## **4. Analysis of the collected data**

The sample size is 102 territorial and administrative units and their distribution are presented as evidenced by the following graph:

**Graph 1.** Distribution of administrative territorial units

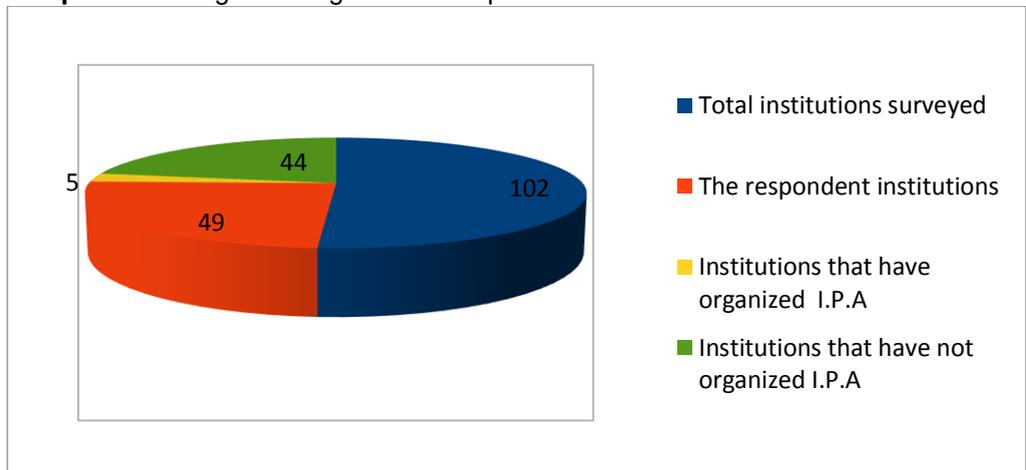
Source: projection made by the author



Source: projection made by the author

From the point of view of the internal audit division, common question for both categories of respondents, of total institutions surveyed 10.2% declare that organized public internal audit and its activities that include the control, the control environment, risk assessment and monitoring. The rest of 89.79% institutions performing public internal audit as outsourced service.

**Graph. 2** The degree of organization of public internal audit

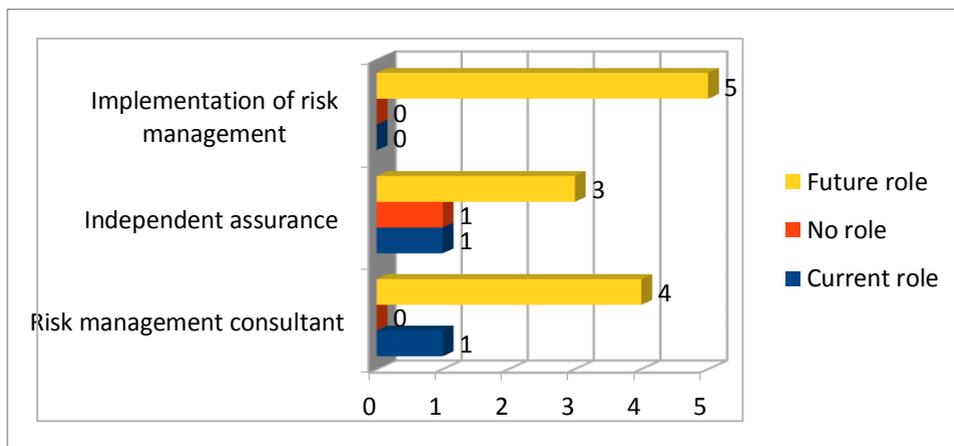


Source: projection made by the author

For the first category of respondents, the questions were focused on the role of internal audit in public in current business practices and activities for the process of risk management, counseling and support granted by the audit reports on the implementation of the process improvement and performance increase.

As a result of the questionnaire, all 5 of the first entity category indicated that the internal audit activity, the public has had responsibility for implementing risk management, reflecting an active role in the learning process of the management to respond to existing risks (80%) and for the identification and assessment of risks (80%). However, only 66.6% offering independent on the process of risk management, and on the advisory role, it seems that the public internal auditors tend to understand well enough to see the risk management implementation process.

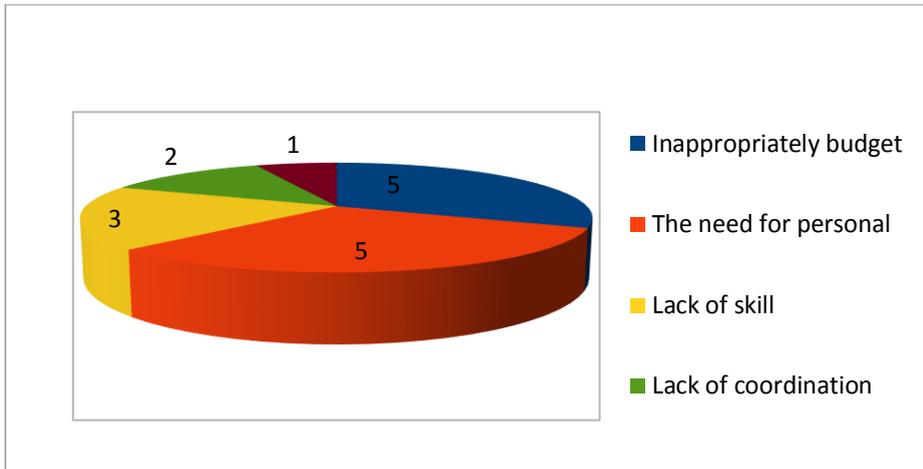
**Graph. 3** Description of the role of public internal audit risk management



Source: projection made by the author

Among the shortcomings identified in the analysis, they could identify the sufficient revenue or funds available and the specialist personnel. In all entities, public internal audit work was carried out with 1-2 auditors, which according to the questionnaire applied requires knowledge of the practices and techniques of management of risk management. The problem of the lack of personnel in the field of public internal audit at the national level is reflected in the local plan generated by the current economic situation of our country and blocking positions in the public domain as well.

**Graph 4.** Problems encountered by the public internal auditors:



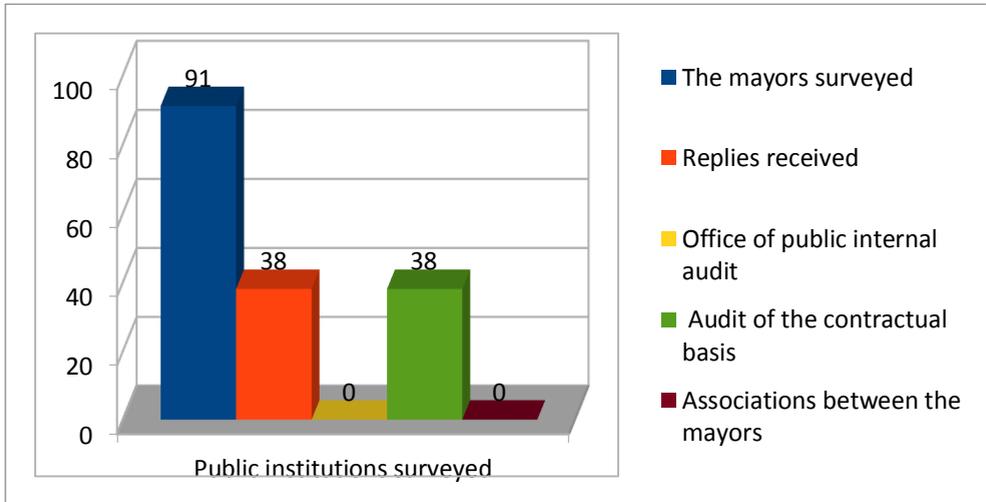
Source: projection made by the author

As for the second category of entities considered for the analysis undertaken, out of 91 from mayoralties in records, we achieved a number of 38 replies. The response rate is of 41.75% and respondents are persons or institutions in the Finance Department, so the answers can be considered relevant to the analysis.

The municipalities surveyed all declared that the work of the public internal audit in the form of outsourced service, or under contractual form. Excluding non-response rate, an increase in the level of activity of internal audit in public administration, in one form or another, and as the regulations require, the local public entities which have not set up their own internal audit department or have not been in cooperation to ensure that the internal audit activity it may be provided by the internal auditors qualified individuals on the basis of contracts for the provision of services, in accordance with the provisions of the law of 2002 on the audit of 672/public, republished in 2011.

At the same time, however, it can be seen that public institutions were not considered appropriate to amend the article 24 in the law 273/2006 on local public finances on the formalization of possibility of association of local public institutions, for the organization and conduct of internal audit, through the county structures with legal personality of associative structures of local public administration authorities, recognised as being of public utility or development associations established in accordance with the law of intercommunity, existed at the level of the institutions surveyed no association of its kind.

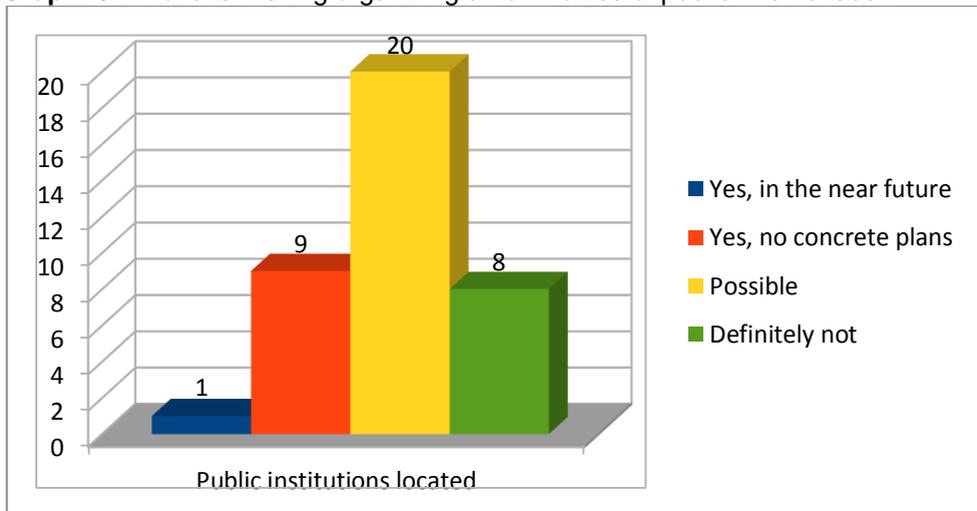
**Graph. 5** Form of organisation of public internal audit



Source: projection made by the author

With regard to the organization of a future office of public internal audit, only one institution has expressed the willingness to hold a certain office, while only possible 52.63% consider this opportunity, arguing the lack of staff and a budget.

**Graph. 6** Institutions wishing organizing an own office of public internal audit



Source: projection made by the author

Taking into consideration the risk management, over 13% of the analysed institutions argue that it is in an advanced stage of development, 37% are in the process of implementing or has been recently adopted, and the rest do not carry out activities specific to the risk management process.

Of the interviewed institutions, in 60% of cases, the liability risk management belongs to a risk officer and the remainder belongs to a person who has other duties.

## Conclusions

We examine the role of internal auditing in risk management in the public sector from the local entities of Bihor county and we find that the activities of the public sector, as well as in the private sector are becoming increasingly more complex due to the news that appear and the risks they face. Organizations providing risk management increasing attention, but implementing an effective risk management requires time and knowledge.

We also document that the public internal auditors know they can play an important role in the management of risk, but there is a number of other activities which must be conducted within the organization. So, they tend to understand the concept of risk management and risk management process, where it is carried out, and of the role they can play in improving and activity, however, issues of disposable incomes allocated to activity, and enough personnel specializing in the field, as well as a lack of interest of management to increase the efficiency and profit of the public internal audit activity, are issues that impede performance and risk management.

The limitation of the paper concerns the analysis of a single county, and the rate of respondents. For future research we should validate our findings by extending the review in other counties of Romania. Likewise, future research should look at the possibility of inserting institutions that use internal audit from private sector, making a comparison between the two sectors.

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## CHALLENGES OF FINANCIAL AUDIT - THE IMPACT OF INTRODUCING UNIQUE REGULATION OF FINANCIAL MARKETS IN ROMANIA

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**Abstract:** *The theme of our research is related to the new type of relationship between financial audits (statutory) and unique regulation of financial markets in Romania. The Romanian authorities have decided as from 2013 regulation of financial markets, capital market, insurance market and private pensions market to achieve by a single entity, this situation will also lead to a number of challenges in the relationship between the auditor and the new regulatory regime. The main elements of our study are: the relationship between the audit committee and regulatory authority; quality of financial reporting for financial market entities. The auditor plays an important role in financial markets because it certifies the financial statements in accordance with European Union practice . It is also interesting to note potential interference that can occur in single regulation between compliance audit and financial stability and return on investment between performance audit and financial markets. In this case, financial regulation can coexist with compliance audit. EU legislation recommends that the auditor discuss with the audit committee the quality and acceptability of the financial reporting process. This recommendation is what should constitute a possible consensus to be highly unlikely between audit committees would align auditors in financial reporting disputes with management financial entities. In this regard, auditors should identify the factors we consider important in determining the quality of financial reporting. .We conducted this research in an effort to identify the possible divergence between the type of regulations that can emit single regulatory authority and the audit process. New regulator will operate on two levels, issue general regulations apply to all three categories of financial markets, capital market, insurance market and private pensions market, but in the same time and in greater extent will issue specific regulations of each market in part. We want to identify the extent to which audit the entities in these markets will be influenced by these changes. Interest is our largest to determine whether the audit can identify any changes in the new regulatory requirements on quality of financial statements. Our research results show the high importance of the audit committee in ensuring the high quality of financial reporting in the financial markets and seeks to identify potential points of conflict between audit conservatism and unique market regulation.*

**Keywords:** *auditing, capital markets, regulatory intervention, standards, GAAP, IFRS*

**JEL:** *M42, M48, N20*

## **Introduction**

The achievement of this research is the result of the emergence of a regulatory entity for financial markets in the institutional landscape of Romania. This entity will regulate the capital market, insurance market and private pensions market, while money market will remain under the authority of the central bank. Under these conditions new elements occur that redefine the relationship between financial (statutory) audit and regulatory policies of public authorities in the field. Auditors play a crucial role in the functioning of capital markets by serving as independent agents that scrutinize firms' financial statements on behalf of shareholders, creditors and other accounting users. In the European Union, they attest that companies, in preparing their financial reports, conform to international financial reporting standards (IFRS) as specified by the International Accounting Standards Board (IASB). It is a well-accepted notion that auditing reduces the information risk in accounting reports, thereby improving investors' investment decision (Arens et al. 2006). Overall, the demand for and the supply of auditing determine the equilibrium auditor conservatism and audit quality. Companies with high business risk induce auditor conservatism, while companies with low business risk induce auditor aggressiveness. This finding contributes to the literature by linking auditor conservatism to client characteristics and therefore identifying the determinants of auditor conservatism in a capital market setting. We also provide a theoretical explanation for the positive relation between firm business risk and conservatism that has been documented. If auditor conservatism is in force, a greater client pressure on auditors improves audit quality, but if auditor aggressiveness is in force, a greater client pressure on auditors impairs audit quality. Client pressure on auditors can take the form of potential client businesses for the auditor, such as nonaudit services and repeat audit engagements (Kornish and Levine 2004). This result is contrary to the popular belief that client pressure on auditors is always bad. We find that client pressure is desirable when the auditor is conservative. The nature of investment efficiency depends on the auditor's attestation.

### **1. Literature review**

Research has documented that there is a positive association between the effectiveness and knowledge of the audit committee and the quality of financial reporting (e.g., Stickney, C., Weil, R., Schipper, K., Francis, J., (2010). They found that more active and independent audit committees were associated with a decreased incidence of financial statement fraud while in a study evaluating a 10 year span of documented incidents of financial fraud. That the financial expertise of audit committee members had little association with the frequency of fraud, work by Watts, R., (2003) suggests that greater financial expertise of audit committee members may lead to a more effective relationship with external auditors. For example, Nocera, J., (2005) found that audit committee members with more knowledge in auditing were more likely to express support for external auditors in reporting disputes with management. This implies that audit committees with financially astute members will be more likely to help auditors in their struggle to maintain their independence from the pressures imposed by management. However, Gibbins et al. (2001) found audit partners' modal response to the importance of audit committees in resolving financial reporting disputes with the client management was

"low." One possible rationale for this finding is outlined in a study by Cohen et al. (2000) who found that experienced external auditors believe that the lack of financial expertise of audit committee members negates the effectiveness of the committee. The effectiveness of audit committees and their ability to help auditors in their quest to maintain true independence may also be somewhat hampered by the strong influence of management. Our recommendations are to invoking new concepts and requirements that may be subject to uncertainty and ambiguity, potentially inhibiting their impact. If there is a lack of consensus on what constitutes financial reporting "quality" then it would be difficult for external auditors to evaluate this attribute and to enlist the support of audit committees in a reporting dispute with management. Although the Ramsay Report (2001) does not discuss the issue of financial reporting quality in the same manner as the BRC, it is imperative for companies in their ability to raise capital from external sources to have a similar understanding of the attributes that constitutes financial reporting quality as that found in primary global markets.

## **2.Financial regulators versus financial auditor independence**

*The tasks of the regulatory model shall include the following:*

(1)undertaking measures aimed at ensuring regular operation of the financial market;(2) undertaking measures aimed at development of financial market and its competitiveness;(3)undertaking educational and information measures related to financial market operation;(4) participation in the drafting of legal acts related to financial market supervision;(5)creation the opportunities for amicable and conciliatory settlement of disputes which may arise between financial market actors, in particular disputes resulting from contractual relations between entities covered by FSA supervision and recipients of services provided by those entities;(6) carrying out other activities provided for by acts of law.The aim of financial market supervision is to ensure regular operation of this market, its stability, security and transparency, confidence in the financial market, as well as to ensure that the interests of market actors are protected.

*Supervision of the financial market:* A stable, competitive and financial system founded on integrity provides the basis for a functioning economy, sustainable employment and secure levels of affluence. The task of supervising the financial markets is therefore a crucially important one in all national economies.

*Integrated supervision:* As an integrated supervisory institution, the FSA, which was founded in 2012, brings together responsibility for supervising all significant providers and functions under one roof. The authority supervises, insurance undertakings, pension companies, corporate provision funds, investment firms and investment service providers, investment funds, financial conglomerates and exchange operating companies. It also monitors activities to ensure that trading in listed securities complies with legal requirements and the principles of fairness and transparency (supervision of the market and stock exchange

*Tiered structure of supervision :* Any efficient and effective supervisory system builds on the work of "upstream" supervisory instances. This is referred to as the tiered structure of supervision. The first tier of monitoring and control is provided by each financial institution's own internal auditing department. The institutions' supervisory boards and auditors form the second tier, which, while appointed by the

individual companies, is composed of independent, third-party experts. The state system of supervision takes over at the third stage.

*Mission:*The primary mission of the institution is to assist through legal, administrative and informational means for the maintenance of stability and transparency on the non-banking financial sector, and to ensure the protection of the consumers of financial services and products.

*Regulatory activity:*The Commission's regulatory activity includes drafting and adoption of regulations and instructions provided for in the legislation, issuance of guidelines and instructions regarding the implementation and interpretation of the codes and laws. The Commission adopts secondary legislative acts concerning laws' implementation in relation to the carrying out of financial supervision. The regulation of the market participants' activity is in conformity with the European legislation, norms and practices.

*Licensing regime:*In its licensing activity the Commission is guided by the principle of impartiality and implementation of a unified approach and criteria with respect to all applicants. The Commission examines the documents that have been attached to the applications for permit issuance or amendment of one that has already been granted in view of their compliance with the regulatory requirements. It is being established whether all the required documents and data have been provided and whether the legal limitations to certain licensing proceedings have been complied with.

*Sanctions:* The relationship between the regulatory body of the capital market - and financial audit can be extended to the single regulatory authority, authority to possess a broad area of responsibility. In this sense, insurance companies and private pension funds can assimilate capital market entities, when acting as investment funds. In this case, financial regulation can coexist with compliance audit. For those synergies to be real we felt that our research must answer the questions on the link between financial auditor independence and audit committee role with financial reporting quality.

### **3. Research methodology**

Thus, we are also interested in how external auditors interpret the recommendations of the BRC as it pertains to financial reporting "quality." To examine how external auditors perceive the effectiveness of the BRC to enhance the quality of the financial reporting process and help maintain auditor independence, we investigate the following research questions. We conducted our research in a study showing the effects of regulation on the single financial authority: functions and responsibilities of the audit committee; quality of financial reporting; communication with the audit committee. The study was conducted on a total of 34 respondents who expressed an opinion on the functions and responsibilities of the audit committee, the quality of financial reporting and the quality of communication with the audit committee.

**Research Question 1:** What do financial auditors consider as important functions and responsibilities of audit committees and what are the resulting implications of these issues for auditor independence?

**Table1: Audit committee elements of influence(n=34)(Research question 1)**

Panel I: Influence elements of audit committee	Mean	s.d.	Freq	%
Influence elements of audit committee				
Ensuring quality of accounting policies and oversight of financial reporting			23	67%
The internal controls of ensuring quality			15	45%
The review of the relationship between the company and external auditors			15	45%
Anticipate financial risks			9	26%
Ensuring the selection/retention of quality, independent auditors			6	19%
The regularly review of the relationship between internal auditors and management			5	14%
High quality, and timely disclosure of financial and other material information to the board, unique markets regulatory, and shareholders			5	14%
Develop a direct, strong, and candid relationship with outside and internal auditors to encourage them to speak freely			4	12%
Other			5	14%
Will audit committee elements of influence change over the next 3 years?				
Yes			20	60%
No			14	40%
Audit committees role in appointment/reappointment of financial auditor <sup>1</sup>	4.55	1.45		
Panel II : Audit committee Effectiveness				
Effectiveness of Audit committees in fulfilling financial reporting responsibilities <sup>2</sup>	4.22	0.91		
The administrative board role in influencing the effectiveness of an Audit committee <sup>3</sup>	4.76	1.68		
The management role in influencing the effectiveness of an audit committee <sup>3</sup>	4.52	1.48		

Reliance placed on audit committee to resolve financial reporting disputes with management <sup>4</sup>	2.81	1.31		
The corporate ownership role in determining the effectiveness of an audit committee <sup>3</sup>	4.89	1.72		
Audit committee influenced by financial analysts' expectations to accept aggressive accounting <sup>1</sup>	3.79	1.38		
Is it important to distinguish between "Form" and "Substance" of Audit committees? Yes No			27 7	80% 20%
Factors that constitute a "good" audit committee				
Independence			15	45%
The expertise in financial literacy			14	43%
Commitment			13	38%
Asks good questions			12	36%
Business knowledge			10	29%
Knowledge of auditing controls			8	24%
Experienced			4	12%
<sup>1</sup> 1=Not influenced at all; 7 = Significantly Influenced				
<sup>2</sup> 1=Not Very Effective; 7 = Very Effective				
<sup>3</sup> 1 =Insignificant Role; 7 = Highly Significant Role				
<sup>4</sup> 1=No Reliance; 7 = High Reliance				
<sup>5</sup> 1=Not Knowledgeable; 7=Highly Knowledgeable				

**Research Question 2:** What are the factors that financial auditors perceive determine financial reporting quality and what role does the audit committee play?

**Table 2: Financial reporting quality (FRQ) (N=34) (Research question 2)**

Panel I: Factors that determine Financial Reporting Quality	Mean	s.d.	Fre q.	%
Clarity of company's financial disclosures <sup>1</sup>	5.57	1.29		
Degree of aggressiveness or conservatism with respect to accounting principles <sup>2</sup>	6.02	1.27		
Other significant management decisions in preparing financial disclosures <sup>2</sup>	5.38	1.21		
Determining factors in financial reporting quality (listed in rank order based on frequency of response)				
Clarity of financial disclosure			16	48%
Degree of aggressiveness and conservatism in accounting principles and estimates			15	43%
Other significant decisions by management in preparing the financial disclosure			5	14%
A comparison to current industry practices			2	5%
Quality of accounting staff			2	5%
Panel II: Audit Committee (AC) and Financial Reporting Quality				
Role ACs currently play in ensuring FRQ <sup>2</sup>	3.43	0.93		
Role ACs should play in ensuring FRQ <sup>2</sup>	5.58	1.15		
AC's effectiveness in reducing likelihood of financial reporting fraud <sup>3</sup>	3.32	1.18		
Do ACs have enough power to confront management?				
Yes			29	85%
No			5	15%
Major challenges today in working with audit committees to ensure sound financial reporting? (listed in rank order based on frequency of response)				

Lack of sufficient financial sophistication on the part of audit committee members			16	48%
Audit committees lack the power or the will to work towards ensuring sound financial reporting			13	38%
Time Constraints			2	7%
Other (e.g. compensation, compensating liabilities)			2	7%
<sup>1</sup> 1=Little Importance; 7 = Extreme Importance				
<sup>2</sup> 1=Insignificant Role; 7 = Highly Significant Role				
<sup>3</sup> 1=Not Very Effective; 7 = Very Effective				

**Research Question 3:** What factors affect the level and quality of communications between the financial auditors and the audit committee?

**Table3:Communications with audit committee (n=34) (Research question 3)**

	Mean	s.d.	Freq.	%
The management influences on the nature, extent, and quality of communication between an outside auditor and the AC <sup>a</sup>	5.06	1.35		
AC factors (characteristics) that will encourage an open and frank communication between an outside auditor and the AC (listed in rank order based on frequency of response)				
Real competency			15	45%
Real independence			8	24%
Private meetings with the Audit Committee			6	19%
Receptive/questioning			6	19%
Frequent meetings/interest			3	10%
Involved in the selection of the auditor			3	10%
Real longevity			2	5%

Other			2	5%
Auditing firm ( auditor) factors (characteristics) that will encourage an open and frank communication between an outside auditor and the AC (listed in rank order based on frequency of response)				
A strong relationship development (openness)			7	21%
Knowledge of client/industry/audit committee			6	17%
Frequent meetings			3	10%
Challenge the audit committee			3	10%
Alter the contract with the financial auditor (longer term, limit liability, rotation, hired by audit committee)			3	10%
Willingness, if necessary, to lose client (with support from the firm)			3	10%
Other			3	10%
<sup>a</sup> 1=Not influenced at all; 7 = Significantly influenced				

## Conclusions

Our research sought to identify the challenges and opportunities raised by a single financial supervisory authority to the independent financial auditor . We conducted on a total of 34 respondents who expressed an opinion on the functions and responsibilities of the audit committee , the quality of financial reporting and the quality of communication with the audit committee .The major functions of an audit committee are to oversee the financial function of the Company. They should have oversight responsibility for systems of internal controls, quality financial reporting and disclosure and financial risk management. Almost half of the respondents (45 percent) also indicated that ensuring quality internal controls and overseeing the audit process, including regularly reviewing the relationship between the company and its external auditors, are important responsibilities of an audit committee. This latter finding suggests that audit committees potentially may evaluate if there is too close of a relationship between management and the auditors that may call to attention a perceived lack of independence on the part of auditors. Surprisingly, despite the emphasis placed by the auditing profession on the potential importance of the interactions between the audit committees and the internal auditors, few auditors (14%) stressed the role of the audit committee in enhancing the effectiveness of the internal audit function.The legislation requires has called for the auditor to discuss with the audit committee the quality and not just the acceptability of the financial reporting process. This recommendation is consensus on what

constitutes “quality,” it will be highly unlikely that audit committees would align with auditors in financial reporting disputes with management. However, the recommendation raises the issue of how “financial reporting quality” is to be defined. In this regard, auditors were asked an open-ended question regarding factors they consider important in determining financial reporting quality. Finally, we asked three questions regarding communications between the external auditor and the audit committee. First, in an open-ended question auditors identified audit committee factors or characteristics that encourage an open and frank communication. The most frequent factors cited were: competency (45 percent); independence (24 percent); private meetings with the audit committee (19 percent); and receptive to auditors questioning financial reporting positions (19 percent). In a second open-ended question we asked participants to identify auditor or audit firm factors that encourage strong communication. There were no overwhelming factors noted. However, those that were cited were: develop a strong relationship with the audit committee (21 percent); knowledge of client/industry/ audit committee (17 percent); frequent meetings (10 percent); challenge the audit committee on financial reporting issues (10 percent); alter the contract with the financial auditor (longer term, limit liability, rotation, hired by audit committee) (10 percent); and willingness to lose a client (10 percent). Therefore, it is possible that the mixed empirical evidence on the economic consequences of the directives of financial authority is due to the use of pooled samples in empirical studies that combine firms with the independence of auditors.

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# USING DEPENDENCY STRUCTURE MATRIX IN OPTIMIZING FINANCIAL AUDIT PROCESS

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**Abstract:** *This paper presents a new approach in evaluating risks of material misstatements in financial audit using dependency structure matrices (DSM). This perspective allows the identification of significant audit risks and can be used by audit managers to optimise resource allocation by focusing on higher risk areas. DSM matrix is widely used in other areas such as industrial production, design engineering and risk management. This approach is not used in financial audit so far. The financial crisis has diminished the activity of the audit clients and has imposed smaller audit fees. The auditors have to optimize their processes in order to maintain the quality of audit, even to improve it for the same audit remuneration. DSM matrix is a solution for this problem. This article points out have to use DSM matrix in financial audit process in order to optimize the allocation of resources, while maintaining audit quality. Our research aims to improve the risk evaluation stage in the financial audit process using DSM matrix to evaluate higher risk areas. We used the Project DSM Tool for representing significant accounts in the Purchase to pay process for a financial audit. Dependencies between accounts were used for creating a DSM matrix that depicts higher risk areas. Also, for each account, several resource allocation parameters such as costs and number of hours to be used for performing audit procedures on that account (from both audit team and client personnel).*

*Our research suggests that DSM can provide useful information in detecting risk areas in significant classes of transactions identified in a risk based audit and we recommend using DSM matrix in the planning phase of the audit in order to avoid redundancies in the audit execution phase. This is important considering that the European Commission recommends in the Green Paper for Audit to improve the quality of audits following the setbacks to the profession caused by the financial crisis.*

**Keywords:** audit, risk based approach, DSM matrix, optimizing cost, resources' allocation

**JEL classification:** M42, M40.

## 1. Introduction

The audit activity is mainly influence by the time allocated to the audit mission and by the resources optimization. As a fact, when splitting the working time, the audit has to realise their priorities considering the risks that can be associated with financial statements. Disseminating this, Pratt, Jiambalvo, J. (2002) pointed out some elements that are related with the audit team and the performance obtained by it. Their study revealed that resources allocation, the number of tasks that each

audit member has and the time budget are elements that influence overall the audit activity.

Asare, S. Cohen, J., Tompeter, G. (2005) emphasise the importance of audit team qualification, Burke, C. S. & all. (2006) proved that the audit team efficiency is influenced by the managerial personnel resources, by managerial materials and by solving the accounting problems taking into considerations all the risks that are associated with company's financial statements, while Francis, J. R. (2004) demonstrated that information about accounting policies and how they are applied by the audited company is important in the audit examination process. Similar conclusions regarding the performance of audit team were extracted by Scott, T., W., Tiessen, P. (1999) who establishes that the audit activity is influenced by their prior targets. As a fact, depending on the mission type and on the resources allocation, there could be realised a comprehensive process of the audited company, of their accounting policies and of how they apply them.

In the main literature, there is a multiple research upon the risk that could be associated with the audit process, evidence about that being pointed out for example by Ohta, Y. (2009) and Knechel, W. R. (2007) who realises a summary about the business risk audit, its history, evolution, and further perspectives.

In order to reveal the risk encountered in the audit process, there is an important need to detect the areas where the audit should pay higher attention, as there are higher risks associated with it. As a fact, the resources allocation is mainly influenced by identifying the potential risk areas in the audit process. Consequently, a proper tool to realize this type of allocation can be the use of dependency structure matrix tool.

DSM matrix is a tool used generally in order to improve the modelling of the system process. As a fact, it can be used for identify groups, for creating packages or for revealing the regions that have similar characteristics. This aspect can be revealed in the audit process in order to identify the areas where the risks are higher, so important financial distresses could be omitted.

The DSM technique was first developed by Steward D. (1967) in order to optimize the product development processes. Further improvements were brought also by the same author in Steward, D. (1981) when he applied it for design engineering process. The design structure matrix is one of the most important research methodologies through which the dependencies between the variables encountered are revealed. The idea of using this, is to optimize the relationship between the activities pointed out in the matrix and moreover to obtain a perspective about the planning activity as Pieroni, M. (2005) and Manzione, L., Melhado, S. B. (2007) proved out. Smith, R. P. and Eppinger, S. D. (1995) redefined the concept of DSM, while Browning, T. R. (2001) reviewed the implementation of Design structure matrix for decomposition and integration problems and emphasis new directions where this model could be applied.

New innovations to this technique were proposed by Banerjee, A. Carrillo, J. and Paul, A. (2007) who realized an analysed upon the complexity involved in the algorithms used for constructing the DSM matrix.

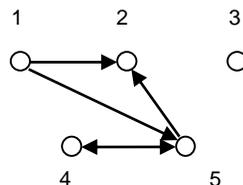
Other innovation were proposed by Mori, T. et al. (1999), in order to developed proper methodology for optimizing the DSM process. As a fact, the partitioning and tearing algorithms were proper developed. Actually, these two ways of quantifying the algorithms from DSM matrix were proposed by Gebala, D.A. and Eppinger, S. D. (1991). The partitioning algorithm is used for reorganizing the ascending sequence

of the items of the matrix for maximising the availability and the amount of the information that the elements analysed had. On the other hand, the tearing algorithm is based on identifying and reorganizing the blocks of elements that are encountered in the matrix. The idea is to check those elements that could become a package, or that have similar characteristics that have to be taken overall into consideration. Regarding the DSM matrix, even though it was proved that it brings important efficiency in reducing the total time allocated to the project, the DSM tool has been rarely applied in economic fields. It was mainly used in engineering studies, like Manzione. L, Melhado, S. B (2007) , Pieroni, M (2005), Murphy, G.C., Notkin D., and Sullivan, K.J. (2001), Müller, H. A., Wong, K. and Tilley S. R. (1994). In order to focus on the perspective of auditors, it is recommended that DSM matrix to be properly applied. As a fact, the time allocated to the audit mission is going to be reduced and moreover a proper resources allocation could be realized. As the financial audit needs additional knowledge to identify the risks associated to audited company, we consider that the DSM tool application can improve sharply the resources allocation. As a fact, the DSM matrix represents the dependencies through which the elements a applying the design structure matrix to system decomposition and integration problems: a review and new directions related, and consequently aspects that are not generally detailed analysed would be encountered in the audit process.

## 2. Research Methodology

We propose an audit approach based on a new methodology to evaluate risks of audit. This new approach refers to uses graph theory to represent accounts in significant classes of transactions identified using risk based approach. The DSM matrix solves this issue. DSM matrix is based on graph theory, like our assumption. A graph is a model that visually describes elements and relationships between them. The components of a graph are: vertices (nodes) and edges. Nodes may or may not have a weight and the edges may or may not have directions and/or costs. Graphs may be represented using adjacency matrix which is a  $n$  by  $n$  matrix ( $n$  = number of vertices in the graph) with elements  $a_{i,j}$  that may be 0 (if there is no edge from  $i$  to  $j$ ) or 1 (if there is an edge between  $i$  and  $j$ ).

Please refer to Figure 1 for graph example and to Table 1 for the adjacency matrix representing it.



**Figure 1:** Graph example  
Source: Authors projection

**Table 1:** Adjacency matrix

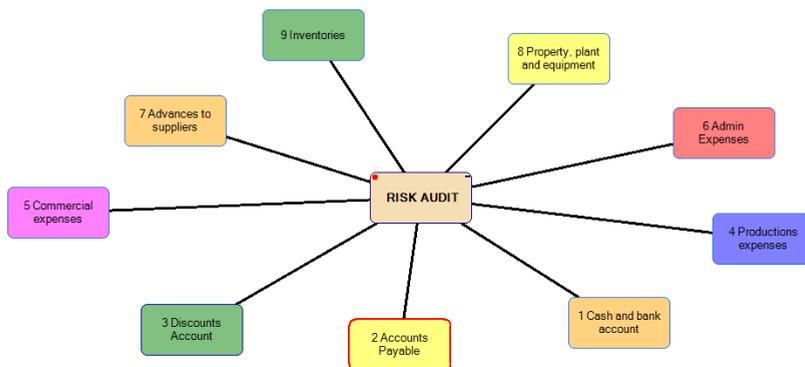
	1	2	3	4	5
1	1	1	0	0	1
2	0	1	0	0	0
3	0	0	1	0	0
4	0	0	0	1	1
5	0	1	0	1	1

Source: Authors projection

The authors used the Project DSM Tool to depict the significant accounts in the purchase to pay class of transactions. In a typical audit the main accounts to be considered for this class of transactions are as follows:

- Inventories;
- Property, plant and equipment;
- Advances to suppliers;
- Admin expenses;
- Commercial expenses;
- Production expenses;
- Discounts;
- Accounts payable;
- Cash and bank

Please refer to Figure 2 for the representation of accounts that impact the risk of significant misstatement for the purchase to pay class of transactions.

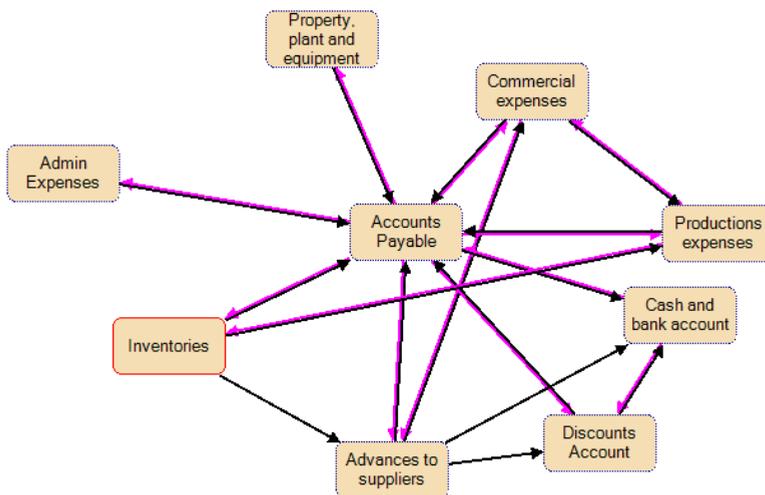


**Figure 2:** Representation of accounts and audit risk  
Source: Author export from Project DSM Tool.

We established the dependencies between significant accounts in the Project DSM Tool based on the following rationale:

- The inventories account relates to Accounts payable, Production expenses and Advances to suppliers accounts;
- The Property, plant and equipment account relates to the Accounts payable account;
- The Advances to suppliers account relates to Accounts payable, Cash and bank, Inventories and Discounts accounts;
- The Admin expenses accounts relates to the Accounts payable account;
- The Commercial expenses account relates to the Accounts payable, Advances to suppliers and production expenses accounts;
- The Production expenses account relates to the Accounts payable, Commercial expenses and Inventories accounts;
- The Discounts account relates to Accounts payable, Cash and bank and Advances to suppliers accounts.
- The Cash and bank account relates to Accounts payable and Discounts accounts;
- The Accounts payable account relates to all accounts above.

Please refer to Figure 3 for the dependencies map, as described above:



**Figure 3:** Accounts dependencies in the Purchase to pay process  
Source: export from Project DSM Tool

Please refer to Figure 4 or the Project DSM Tool menu for defining dependencies between accounts.

Components	Strength
System: RISK AUDIT	
2 Accounts Payable	<input checked="" type="radio"/> Dependent <input type="radio"/> None
3 Discounts Account	<input checked="" type="radio"/> Dependent <input type="radio"/> None
4 Productions expenses	<input type="radio"/> Dependent <input checked="" type="radio"/> None
5 Commercial expenses	<input type="radio"/> Dependent <input checked="" type="radio"/> None
6 Admin Expenses	<input type="radio"/> Dependent <input checked="" type="radio"/> None
7 Advances to suppliers	<input checked="" type="radio"/> Dependent <input type="radio"/> None
8 Property, plant and equipment	<input type="radio"/> Dependent <input checked="" type="radio"/> None
9 Inventories	<input type="radio"/> Dependent <input checked="" type="radio"/> None

**Figure 4:** Defining dependencies for the Cash and bank account

Source: export from Project DSM Tool

For each account we allocated a standard number of hours and cost, considering a typical audit engagement. For instance, for the Cash and bank account, we considered 20 hours for audit team members and an additional 8 hours needed from client personnel (for audit support purposes). Also, a cost of 3000 RON was considered based on hourly rates for audit senior and junior staff.

Please refer to Figure 5 for the defined resources in the Project DSM Tool

ID	Name	Effort (H...)	ID	Name	Total Cost
1	Cash and bank account	28,0	1	Cash and bank account	5000
2	Accounts Payable	48,0	2	Accounts Payable	3000
3	Discounts Account	28,0	3	Discounts Account	3000
4	Productions expenses	68,0	4	Productions expenses	8000
5	Commercial expenses	48,0	5	Commercial expenses	8000
6	Admin Expenses	48,0	6	Admin Expenses	5000
7	Advances to suppliers	48,0	7	Advances to suppliers	5000
8	Property, plant and equipment	48,0	8	Property, plant and equipment	5000
9	Inventories	68,0	9	Inventories	8000

**Figure 5:** Defining resources in the Project DSM Tool

Source: export from Project DSM Tool

### 3. Results and discussion

Based on the data input above, we obtained the following results in the Project DSM Tool:

- DSM matrix;
- Combined resource allocation assessments;

The DSM matrix shows the areas with potential high risk of material misstatements based on dependencies between account classes as described in the previous section. We noticed four areas with potential higher risk that should be considered when planning the audit procedures. The areas where audit managers should focus their tests are depicted in Figure 6.

#	Task	1	2	3	4	5	6	7	8	9
1	Inventories	●					●		●	
2	Property, plant and equipment		●						●	
3	Advances to suppliers	●		●		●			●	
4	Admin Expenses			●	●				●	
5	Commercial expenses			●		●			●	
6	Productions expenses	●				●	●		●	
7	Discounts Account			●					●	
8	Accounts Payable	●	●	●	●	●	●		●	●
9	Cash and bank account			●				●	●	●

**Figure 6: DSM Matrix**

Source: export from the Project DSM Tool

In the first stage of the analysis, as per the DSM matrix results, auditors should consider for testing the following account pairings:

- Discounts - Accounts payable - Cash and bank account
- Commercial expenses – Production expenses
- Advances to suppliers – Commercial expenses – Discounts – Accounts payable – Cash and bank account
- Admin expenses – Commercial expenses

The Accounts payable should be considered for further testing as it is related to all accounts in the Purchase to pay process.

In the second stage of the analysis, auditors may conclude that two of the areas, Commercial expenses – Production expenses and Admin expenses – Commercial expenses, do not contain risks of material misstatements and should not be further tested.

The combined resource allocation table shows the total allocated resources (audit hours and costs) considering the dependencies described in the previous section and a rework percentage of 10-20% (i.e. up to 20% of the work performed by auditors will have to be re-performed following reviews from the audit managers).

Please refer to Figure 7 for the allocation table as per the Project DSM tool.

Option N...	Score	Action	Complexity	Cost	Effort
Perform	10	Simplify: Admin Expenses depends on Accounts Payable	21,0	8,9	9,8
Perform	10	Simplify: Accounts Payable depends on Admin Expenses	21,0	8,9	9,8
Perform	10	Delay element 6: Admin Expenses	21,0	8,9	9,8
Perform	10	Promote element 6: Admin Expenses	21,0	8,9	9,8
Perform	7	Promote element 9: Inventories	21,0	14,3	13,9
Perform	7	Delay element 2: Accounts Payable	80,2	48,2	52,5
Perform	7	Promote element 2: Accounts Payable	80,2	48,2	52,5
Perform	6	Delay element 3: Discounts Account	21,0	10,7	11,5
Perform	6	Delay element 1: Cash and bank account	21,0	17,9	11,5

**Figure 7: Combined resource allocation**

Source: export from the Project DSM Tool

Based on the output from the Project DSM Tool we observe that the most complex elements are Accounts payable, the same account that we observe from DSM matrix.

From this analysis we observe that the Accounts payable are the most significant element and the risks are concentrated in this area.

This type of analysis can help the management team to choose the most efficient allocation of resource while covering all significant risks of misstatement.

#### **4 Conclusion**

Evaluating audit risk is one of the main challenges in the audit process especially when using a risk based approach. Auditors have to find a balance between the allocated resources and the assurance obtained from performing audit procedures considering the costs. The financial crisis had a significant impact on audit fees, with audit firms constantly having to reduce costs while maintaining audit quality. Even in the Green Paper for Audit the European Commission recommends having high quality financial audits because the sustainability of this profession is doubtful.

The current approach on financial audit must be reconsidered in order to provide creditworthiness for the audit opinion.

Our research aims to improve the risk evaluation stage in the financial audit process using DSM matrix to evaluate higher risk areas. Based on this evaluation audit managers can better allocate resources to cover these areas and thus to optimize the audit process while maintaining audit quality.

As shown in this paper, DSM can provide useful information in detecting risk areas in significant classes of transactions identified in a risk based audit.

We recommend using DSM matrix in the planning phase of the audit in order to avoid redundancies in the audit execution phase.

The main limitation of our research is the lack of real life audit data. In order to obtain real audit data, inside information is needed and the confidentiality principle of audit does not allow auditors to disclose such information.

Our plan is to develop our research by applying DSM matrix to an audit engagement and to compare the results in detecting risk between the classic audit approach and the DSM approach. When the model would be implemented into practice will be able to analyse the gain in audit quality made by this new methodology.

#### **Acknowledgement:**

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## CHALLENGES OF INTERNAL AUDIT IN THE CURRENT CRISIS

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**Abstract:** *Modern economic theories reject the generalization of theories concerning the economic and financial crises. Each financial crisis is unique, a historic accident, generated by specific factors in a certain socio-economic and political set-up. According to these theories, crises cannot be anticipated so as to minimize their negative effects. In spite of the fact that economic and financial crises are not identical and do not produce identical effects, history teaches us that they are strongly correlated with the cyclic nature of economic processes. The current economic recession, which shows in all fields of activity, is determining auditors to make evaluations which are a lot more precise, based on extensive procedures, as long as the presumption of activity continuity into the future is accurate. In this context, internal audit is individualized as an managerial assistance function, which allows a correct perception of the reality of the business as a whole and/or as predefined processes. The purpose of this paper is to create an overall picture of internal audit by collecting data and information from literature and showing the dimensions and the internal audit practices internationally. Therefore, we conducted a research based on the analysis of national and international publications, various articles and studies in the financial press, on the emergence and development of the internal audit function both internationally and nationally. Later we analyzed the position of internal audit in terms of global financial crisis, all these leading to the usage of a comparative study of twelve international companies in order to highlight the specific features of the internal audit function in each organization. Our intention is to emphasize aspects of internal audit departments, relations between them and the management, their role in companies based on studies provided by Protiviti, a global consulting and internal audit services company, having experts specializing in risk, consultancy and transactions.*

**Keywords:** *audit; internal audit; audit practices; multinational corporations*

**JEL classification:** *M42*

### 1. Introduction

From a territorial, durational and economical and political effects' standpoint, the 1929 crisis, also known as the Great Depression, can be considered, up to this moment in time, the most severe. The Great economic Depression, which started in the United States of America, was preceded by a period of 9 years (between 1920 and 1929) of economic development, which was supported by the increase in circulation of the monetary mass by the Central Bank of America – Federal Reserve (FED), as well as the relaxation of the credit standards and reduction in interest rates.

As a consequence of FED's monetary and financial policy, the population bought stock massively, which registered a constant increase in the Stock Exchange, up until September 1929, when the great Wall Street Crash happened. FED intervened by reducing the monetary mass and by restricting credits, the follow up being a massive bankruptcy in all sectors of the economy: agriculture, industry and banking. National production decreased to half its previous values and the unemployment increased.

The current financial crisis was triggered in the USA in 2007, ten years after the last extended financial crisis from South-East Asia. The first signs of what was to come were experienced in the summer of 2007, when financial institutions started acknowledging that they are dealing with significant losses on sub prime mortgage backed securities (CAFR 2009). The crash of the Federal Housing Administration (USA) is often considered responsible for the generation of the crisis, but the vulnerability of the financial system was caused by complicated contracts and financial operations, subjected to leverage ratios. The USA's monetary policy priced credits at ultra-low rates, thereby encouraging very high leverage ratios and, according to American Professor of Sociology John Bellamy Foster (who wrote extensively on the subjects of financial crisis), a "hypertrophy of the financial sector". A report on the crisis published by the Association of Chartered Certified Accountants identifies as the main factors that generated the crisis the following elements (CAFR, 2009:442):

- The failure of corporate governance
- The failure of institutions to assess and manage the existing links between business risks and the remuneration and incentive systems, which were not at all designed to favor stockholders
- Errors in the process of identifying and managing risk
- The weak influence or even a minimal manifested power of banks' risk management departments
- Weaknesses in the financial reporting systems and regulations.

The relevant economic theories, which established efficiency as an essential instrument of economic growth, are being called to question. Globalization, as a mass phenomenon, combined with the exacerbation of commercial policy the financial markets in order to gain profit by any means necessary, constitute the apotheosis of the economic crisis. The appetite for considerable profits with minima efforts was instilled in generations of managers, who were trained to step up to manage big corporations, and fostered, in the beginning of the 80's, economic policies which permitted the complete deregulation of all economic markets, but especially the banking and stock exchange markets, concomitantly with an unprecedented reduction of the state in the economy (CAFR, 2009:383-446).

As a result of the crisis, it was considered necessary the reports handed in by auditors in the preceding periods were submitted to analysis, which highlighted the fact that, in numerous situations, shortly after an auditor emitted an unqualified opinion regarding the financial statements of a company, they were no longer capable to continue their activities and they collapsed. The attention was focused on auditors who gave the green light on these financial statements, signing their consent that the accounting practices and regulations were kept. In many cases the auditors also provided their clients with other services, besides financial audit, which inevitably raised into question the delicate subject of the auditors' independence. When internal control and internal audit is efficient, the time allocated by the financial

auditor is diminished. This fact means fees reduced for the auditing activity according to Dobre F., Vilsanoiu D., Turlea E. (2012).

One of the reproaches of the audit activity would be precisely the non-compliance with the auditor's independence criteria, necessary for the financial audit to be efficient. The following elements also have a negative impact on the audit activity and can be taken into account in the context of economic crisis:

- Using an audit model which had become obsolete, when considering the complexity of the transaction subjected to said audit
- Not granting due importance to audits based on risk-aware methodologies

According to the International Internal Audit Standard 2110, even though it is not very explicitly mentioned, the internal audit should convey to management and the audit committee from within the company, the results of the efficiency monitoring and evaluation activity, with which the risk management systems functions. The internal auditors will have to check and evaluate the efficiency of the risk management system, which needs to be approached as an integral part of the assurance activities for companies' management. Thus, the internal audit is not responsible for the implementation of the risk response actions, but is responsible for providing management with reports which convey the significant information regarding key risks and their efficient management. Thereby, the internal audit offers insurance as to the efficient functioning of risk management, without being responsible for making any decisions as regards response actions to mitigate the identified negative risks. Therefore, one of the major effects of the crisis is the drastic decrease of the users' confidence in the accuracy and completion of financial statements, financial auditors being the ones to offer a reasonable level of assurance regarding the faithful image reflected by financial statements.

## **2. Case study concerning the analysis of internal audit practices in multinational corporations**

### ***2.1. The objectives of the case study and stating the used material***

The actual case study is based on research conducted by the company Protiviti, which is a global business consulting and internal audit firm, composed of experts specializing in risk, advisory and transaction services. Protiviti has offices in 61 major markets, out of which 33 are in the US and 28 in two Americas, Asia and Europe. The firm also has risk consulting partnerships with firms from Abu Dhabi, Caracas, Dubai, Jakarta, Kuwait and Lima.

The company was founded in 2002, when Robert Half International, reached an employment agreement with Arthur Andersen LLP to hire approximately 800 professionals. These were familiarized with Andersen's internal audit, business and risk consulting practices. The employees were the basis from which Protiviti started. The name of the company was chosen based on a branding study conducted by the founding company. It is an invented term which communicates the key attributes - professionalism and pro activity, as well as independence and integrity. The presence of the three „i” in the word represents „independence”, which is, probably, the most important concept. Beyond the linguistic aspects, the name proved to be unique, becoming a world brand.

Protiviti services respond to challenges related to: managing operational and financial risk, the technology to manage risks and effectiveness; litigations and investigations.

The studies conducted by this company are focused on describing the internal audit activities of several multinational companies. Based on information from these studies, verified with information from the companies' websites, a comparative study of several relevant characteristics related to internal audit was conducted. The first two subchapters of the study familiarize the reader with general information about the organizations, their scopes of activity and describe their internal audit department. The next two subchapters cover aspects related to the setting of objectives for the twelve companies and the manner in which they are to be reached. The last subchapter describes the relationship between the internal audit and the corporate governance of the entities.

The aims of the present study are identifying the main characteristics specific to the internal audit function of multinational corporations, emphasizing the internal audit's role in identifying and managing risk and, also, its relationship with the audit committee.

## 2.2. General description of the companies

**Table 1.** The activity domains of the companies

Financial services	Pharmaceuticals	Energy	Other fields of activity (Electronics, software)
Accenture Commonwealth Bank Deutsche Bank SPB Bank Mandiri	Dentsply Talecris	Enel Shell	Royal Phillips Electronics SAP

Source: Authors' projection based on data collected from each company's website

The entities analyzed within the scope of this project come from various, distinct activity fields, as it can be observed in Table no. 3. Thus, half of these entities are part of the financial sector, namely: Commonwealth Bank, Deutsche Bank, Bank Mandiri are highly developed banking institutions in the area in which they come from;

- *Deutsche Bank*, with their headquarters in Germany, is an investment bank based on a strong private franchise system. A banking leader in Germany and in Europe, Deutsche Bank offers financial services all around the globe and continues to extend its services in Asia, North America and the important world markets.

- *Commonwealth Bank* from Australia is one of the largest companies listed on the Stock exchange, offering complete financial services to its clients. This bank has more than 1.000 branches, 3.500 ATMs and 3.800 postal agencies, having the largest distribution network in the financial services market from Australia. Internationally, the bank has branches in Indonesia, New Zealand, China, Great Britain, USA, Singapore and Japan.

- *Bank Mandiri* is the largest bank in Indonesia. It was formed by the merger of four state banks. In 2008 the bank had approximately 960 subsidiaries, some of

which were in Singapore, Hong Kong, the Cayman Islands, Shanghai and Dilly. Some of the most important branches of the bank are Bank Syariah Mandiri, Mandiri Sekuritas, AXA Mandiri, and Bank Mandiri Europe Ltd. in London.

- *Accenture* (Ireland) offers management consulting, as well as other technology and externalization services, its activities being spread over 52 countries. In the last fiscal year, the company, which is listed on the New York Stock Exchange, had a net turnover of over 21 billion dollars.

**5.1** *Prudential Plc.* (Great Britain) is an international company that offers financial services such as: insurance, pensions, investments and others. Structurally, Prudential PLC, is made up of four entities, namely: Prudential UK, Prudential Corporation Asia, Jackson National Life Insurance Company, and M&G. Prudential PLC has a reputed number of over 21 de millions clients.

**5.1** *SPB* is an insurance specialized company originating in France and which operates in over 11 countries and has more than 822 employees. It was focused mainly on the banking sector, but currently offers not only banking products insurance policies, like insurance policies for banking cards, but also insurance policies for consumer products, such as insurance policies for mobile phones or other technological goods, insurance policies for sport equipment and insurance policies which cover everyday life events (like marriage, retirement).

The two companies from the medical field, DENTSPLY International and Talecris, have their headquarters in the United States of America.

*DENTSPLY* is a dental instruments and equipment producer, present in more than 120 countries. It is predominantly active on the USA and Canadian markets, but it also penetrated the European market (particularly France, Germany, Italy, Switzerland and England). *DENTSPLY* is also present in Central and South America, the Pacific Rim and South Africa. At the same time, the company holds marketing activities in Moscow in order to serve former Soviet Union countries.

*Talecris* worked in partnership with Bayer Pharmaceuticals until 2005 when the two companies separated. *Talecris* commenced its activity with revenues reaching 1 billion dollars, but then the company meant a series of products without having a real organizational structure. Presently, *Talecris* is a global entity which discovers, develops and produces essential treatments for humans whose health is in danger, by offering different therapeutic methods.

*Enel* and *Shell* are two of the energy sector giants, on a worldwide scale, being the main energy suppliers.

*Shell* is a Dutch company with revenues of 278 billion dollars in 2009 and over 101.000 employees in 100 countries from the globe.

*Enel* Italia is the largest energy corporation, and in Europe, Latin and North America is the second in terms of installed capacity, production and sales of electricity and gas. After acquiring Spanish utilities' company Endessa, together with its partner Acciona, *Enel* serves consumers with more than 50 million in power and gas. The company operates a varied array of hydroelectric, thermoelectric, nuclear, geothermal, windmill and solar energy stations.

*SAP* is one of the world's largest suppliers of enterprise software and software-related services, which help accelerate business innovation for its clients. The company has locations in over 120 countries. It was founded in 1972 and presently employs 47.500 specialists, out of which 13.000 work in Waldorf, Germany, where the headquarters of the company are. *SAP* has sales points in over 50 countries

worldwide and is listed at the Stock Exchange in several countries. The company had revenues of 10,7 billion dollars in the previous year.

*Philips* is a company originally from the Netherlands and presently employs over 116.000 in more than 60 countries and in 2009 had sales in value of 23 billion dollars. The company is the world's largest producer of lighting equipment, one of the first three producers of medical equipment and the largest producer of consumer goods in Europe (December 2007).

### 2.3. GENERAL INFORMATION REGARDING THE INTERNAL AUDIT DEPARTMENT

**Table 2. Comparative data referring to audit budget, number of years since the functioning of the internal audit department and the number of internal auditors**

Company	Internal audit Budget	No. of years of functioning for the Internal Audit	Number of internal auditors
<i>Accenture</i>	unknown	9	45
<i>Commonwealth Bank</i>	15 mill \$ US	21	90
<i>Deutsche Bank</i>	15 mil. \$ US	50	400
<i>SPB</i>	< 1 mil. \$ US	2	3
<i>Philips</i>	unknown	>70	75
<i>SAP</i>	1-5 mil. \$	14	34
<i>Shell</i>	> 90 mil. \$	>50	250
<i>DENTSPLY</i>	< 1 mil. \$ US	15	5 (full-time) + 10-15 (guest auditors)
<i>Talecris</i>	1-5 mil. \$ US	3	3 interns + 3-4 in partnership
<i>Bank Mandiri</i>	65,4 mil \$	10	117
<i>Prudential Plc.</i>	£16 mil.	not certain	~ 130
<i>Enel</i>	€ 1 mil.	>10	~ 100

Source: Authors' projection based on data collected from each company's website

The comparative analysis is based on three variables, namely:

- The budget apportioned by the company to the internal audit department
- The number of internal auditors
- Number of years of functioning of the internal audit department

The following aspects can be highlighted:

- In companies which have an internal audit department for more than 50 years, such as: Deutsche Bank, Phillips, Shell, the number of internal auditors within the department as well as the budget is higher.
- There are also entities, for which even though the budget is quite high, as well as the number of internal auditors, not the same can be said about the number of yours the internal audit department is in function. This is the case for Mandiri Bank, for which the internal audit department is in function for 10 years, with an apportioned budget of 65,4 million dollars and with 117 internal auditors.
- The case of a relatively low budget for internal audit, but with a large number of internal auditors, is exemplified by Enel that has approximately 100 internal auditors.

**Table 3. Companies' objectives and the strategies to achieve them**

Analyzed criteria	DENTSPLY	Talecris	SAP	Philips	Shell	Enel
<i>Planned objectives</i>	-the reduction of risk exposure -the development of cost reduction programs	- the surveillance of the financial sector	- internal control, the covering of risk management - to increase the efficiency of control processes - to develop the reputation of internal auditors	- the inclusion of management risk in the audit process -to assure financial reposting conformity	- risk management - internal control	- the creation of an international audit department – to follow the ethics' code
<i>Strategies to achieve objectives</i>	- the use of the program ACL; (the use of technology reduces the auditor's travel expenditure)	- Through the use of ACL program	- through the SAP application	- the implementation of ETR	- the compound effect of auditors working with technology (the basis of this company lies on these two elements) - personnel training	- the ERM model (concentrating on the processes and the risks)

Source: Authors' projection based on data collected from each company's website

### 3. CONCLUSIONS AND SUGGESTIONS

The aim of this paper was to stress some aspects of the internal audit function within international companies, based upon information provided by Protiviti, a global consultancy and internal audit company made of risk, consultancy and transaction experts.

In our research, we took into account several criteria:

- The companies' field of activity
- General data about the audit department (age of the audit department within the organization, its budget, the number of internal auditors)
- The objectives of the internal audit department
- The strategies used to accomplish these objectives
- Corporate governance

The companies that we analyzed have different fields of activity, mainly within the financial sector. Half of the twelve companies in discussion act on the financial market, and the rest belong to the pharmaceutical, energetic, software and electronics fields. The correlation between this analysis' criterion and the other variables was not taken into account mainly because of the lack of a representative sample of firms from the same field of activity that could have highlighted the particularities of belonging to the above-mentioned field. However, there might be cases in which a certain feature is specific to a field of activity.

According to information supplied by Protiviti, companies which grant a high budget to the internal audit function, are the following: Commonwealth Bank, Deutsche Bank, Shell, Mandiri Bank, Prudential Plc.; the budgets vary from 15 to 65,4 million dollars, the highest value of 65,4 million \$ is allocated to the internal audit department of Mandiri Bank.

As a general conclusion, it can be said that the internal audit function differs from one organization to another, because the organizational culture has a major influence. However, for all companies, the attention to risk management, internal control and continuous surveillance can be distinguished as joint interests. These common desiderates can be reached with the use of technology or applications, such as: ACL, PGP, SAP, MAPS, AWARE, CAATs etc., which combined with the knowledge and skills of the auditors, contribute to the increased efficiency and performance of internal audit. The role of internal audit is paramount within a company, as the reports and information that it supplies is the basis for managerial decisions.

Several of the companies in discussion decided to constitute an audit committee or a risk committee in order to accomplish their risk management and internal controlling responsibilities.

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# AN EMIPRIC STUDY ON THE ROLE AND UTILITY OF THE FINANCIAL AUDIT IN ROMANIA

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**Abstract:** *The present article presents the results on an empiric study on the role and utility of the financial audit in Romania. The statistic population is formed from three groups namely the financial auditors, financial managers of the audited firms and the users of the audited accounting information. The results of the questionnaire have been analysed by the help of Kruskal Wallis Test, which has shown that for every statement the differences between the three groups are significant. Next the results have been interpreted globally. This way has been demonstrated the hypothesis according to which there are differences between perspectives and expectancies between the financial auditors, financial managers of the audited firms and the users of the audited accounting information in Romania regarding the role and utility of the financial audit. At the end of the study we have proposed solutions as to getting closer the expectancies of the three groups concerning the role and utility of the financial audit.*

**Keywords:** *empiric study; the role of the financial audit; the utility of the financial audit; differences of perspectives; differences of expectations.*

**JEL classification:** M 42

## 1. Generally Introduction

At the international level the role of the audit is of great interest and widely debated, in order to clarify the difficulties which come in understanding the social efficacy of the financial audit, as a lack of understanding the objectives, responsibilities or its limits.

The hypothesis from which starts this research is the fact that there are differences of perspectives and expectations between the financial auditors, financial managers of the audited firms and the users of the audited accounting information. We focused on realities of Romania and Spain concerning the role, utility and the independence of the present financial audit.

To demonstrate this hypothesis we have proposed the following objectives of the research: (1) Investigating the role and utility of the financial audit in Romania as seen by the financial auditors, managers of the audited firms and the users of the audited accounting information; (2) Determining the significance of the differences of

perspectives and expectations between the three groups in Romania. (3)Identifying some closing possibilities of the expectations between the three groups.

## 2.The methodology of research

To demonstrate the hypothesis and to touch the objectives of the research we have made an empiric research, a quantitative one.

Firstly we have realised a serious activity of research, regarding the statistic population which will enter in the study. This way we have established the three groups interested in the work of the financial auditor to whom the questionnaire is addressed - financial auditors, financial managers of the audited firms and the users of the audited accounting information. According to the characteristics of the statistic population we have established the competence of the sample for each of the three groups, so that the results to be interpreted at the global level and to have a national relevance.

*Table 1 The structure of the sample*

	QUESTIONNAIRES		
	SENT	RECEIVED	
		Absolute value	Percent
AUDITORS	600	211	35,17%
MANAGERS	504	133	26,39%
USERS	492	157	32,30%
TOTAL	1596	501	31,28%

Source: own processing

The questionnaire is anonymous and contains closed questions, positively formulated. To make the work easier for the person who fills in the form and to be able to quantify the answers we limited the answers to five, on a value scale from 1 to 5, according to Likert Scale, where 1 represents the maximum level of agreement, 5 represents the maximum level of disagreement, 3 represents the neutral value and 2 and 4 intermediate values of agreement and disagreement. Only one single answer is to be given.

The process of sending and receiving the answers has been by e-mail, during February-December 2012. The answers have been centralised by an informatics Excel programme, specially designed for it and interpreted with the help of econometric models Kruskal Wallis and Mann Whitney, which have shown if the differences for each statement of the questionnaire between the three involved categories are significant or not.

Also, the results of the tests have been incorporated inside some tables, which are the basis of the descriptive analyses of the questionnaire results.

## 3.Previous studies

In the last years at the international level have been realised a lot of studies empiric and comparative concerning the financial audit. First of all we have to remind the fact that the European Commission has initiated a large process of consulting among the EU member countries concerning the role of the financial audit, the independence of the auditors, information given by the audit Report, concentrating

the audit market inside Big Four or the problems connected to the corporative governance.

If we talk about the role and the utility of the financial audit there are researchers which state the fact that only if the financial audit hadn't been imposed to the firms as a legal obligation but as a voluntary one it could have been proved how appreciated its role is by the firms and users. Other studies sustain the necessity of the financial audit and its regulations by the professional organisms, considering the protection of the users on the capital markets (Humphrey and others, 2009).

In what concerns the term "audit expectation gap" there are studies which sustain the necessity of educating the public regarding the limits of the financial audit (Fowzia, 2010) and (Porter, 2009).

In the last years have appeared studies which debate the role of the financial audit during the periods of the economic crises. This way are being analysed the characteristics of the audit committees from the firms affected by the crises and of those which haven't been affected (Rahmat and others, 2009), are exposed the challenges and opportunities which crises offers to the financial auditors (Fraser and Pong, 2009), or it is offered a reflection on the actual audit practices, specially referring to auditing new forms of investments and complex financial instruments (Sikka and others, 2009). Also, based on the found information from the managers of some financial institutions, it is analysed the present financial crises from the perspective of the corporative governance (Haspeslagh, 2010). The most recent is the study on the firm PriceWaterhouse Cooper from 2011 which analyses the perception of the investors from England on the role and utility of the financial audit in the context of the actual economic crises.

In Romania we do not have many empiric studies on themes of financial audit. Still lately have appeared some specialty magazines, but generally they are reduced. Some examples might be: "The statistic explore of the audit market having as a purpose the appreciation of the auditor" (Jaba, Robu, 2011) and refers to the connection and direct effect which has on the independence of the auditor the financial performance of the audit firm; "The external auditors and the corporative governance under the impact of the financial crises" (Dobroțeanu and others, 2011) which treat the role of the external audit and of the corporative governance in credibility of the financial report of the firms; "The dynamic of the perceptions regarding the external audit under the impact of the financial crises" (Dobroțeanu and others, 2011) an empiric study about the degradation of the perceptions of a group of students on the problems "audit expectation gap" before starting the financial crises and after its starting; "The importance of the information offered by the financial audit for managers, investors and financial analysts" (Cernea, Ștefănescu, 2012) – an empiric study which refers to determining the degree of appreciation of the information delivered by the audit report by the users.

Years ago this type of study were specific to Anglo-Saxon countries, but today they have extended to all European countries, as they allow touching a better convergence between them. My research has a quite big extending and a very welcomed one in Romania as „at the actual moment, the specialty literature does not know a lot of studies dedicated to this problem and especially to investigating the differences of perceptions regarding the external audit in the specific circumstances of the Romanian environment”.

#### 4.The econometric analyses of the obtained results

Kruskal Wallis Test is a nonparametric test used only when there are more than two independent groups. To analyse the data these have been transformed into ranks. The test has been used to evaluate if the differences at the ranks level are significant or not. The calculations have been made for each statement of the questionnaire. The hypotheses associated to the Kruskal Wallis test are:

$H_1$  - There is NO statistic significant difference between the medians of the analysed groups;

$H_2$  – The Medians of the investigated groups differ significantly.

The hypotheses are accepted or rejected according to the value of the K coefficient associated to the test.

The Formula for Kruskal Wallis Test is the following:

$$K = \frac{12}{N(N+1)} \sum_{j=1}^J N_j \bar{R}_j^2 - 3(N+1) = \frac{12}{N(N+1)} \sum_{j=1}^J \frac{R_j^2}{N_j} - 3(N+1) \quad (1)$$

The first formula is equivalent to the following (2) and is being used when all the ranks  $R_{jk}$  are different and have values between 1 and N.

$$K = (N-1) \frac{\sum_{j=0}^J N_j (\bar{R}_j - \bar{R})^2}{\sum_{i=0}^J \sum_{k=0}^{N_j} (R_{jk} - \bar{R})^2} \quad (2)$$

where,

$j$  = the number of groups

$N_j$  = the number of observations inside each group N =total number of observations

$R_{jk}$  = the number of observation K inside the group j

$\bar{R}_{jk}$  = the average of the ranks of the j group observations

$\bar{R}$  = the average of all ranks and observations

K = the calculated value by Kruskal Wallis Test

The correction of K, given by the formula:

$$1 - \frac{\sum_{j=1}^g (t_j^3 - t_j)}{N^3 - N} \quad \text{where,}$$

g is the number of repeating groups

$t_j$  is the number of repeating in the group j

The theoretical interpretation of Kruskal Wallis Test is based on the table values of the Test  $\chi^2$ , for  $c = j-1$  degrees of liberty and a probability of guarantee of the results of  $\alpha$ . As bigger the sums of the group as higher the value of the test is and has more chances to a significant variation. As the differences of the between the ranks of the groups are smaller, going towards 0, the variation is insignificant.

The critical score for:

$\alpha = 0, 01$  level of trust and  $c = j-1 = 3-1 = 2$  degrees of freedom is 9,210, and for

$\alpha = 0, 05$  level of trust and  $c = j-1 = 3-1 = 2$  degrees of freedom is 5,991.

The result K obtained for every statement of the questionnaire was compared to its value  $\chi^2$  from the Table. When:

$K \leq \chi^2$  we accepted the hypothesis as being null, the differences between groups being insignificant;

$K > \chi^2$  we accepted the hypothesis alternative, the differences between groups being significant.

One of the objectives of this research was determining the significance between the differences of perspectives and expectations which exist between the three groups in Romania. This way, according to the results obtained as applying the Kruskal Wallis Test from the total of 34 questions of the questionnaire referring to the role and utility of the financial audit, for 20 of them the differences between perspectives and expectances have resulted as being significant, for a level of significance of 1% or 5%.

*Table 2 Significant differences according to the results of Kruskal Wallis Test*

	TOTAL STATEMENTS	DIFERENCES LEVEL OF SIGNIFICANCE		TOTAL DIFERENCES
		5%	1%	
THE ROLE OF THE AUDIT	14	1	5	6
THE UTILITY OF THE AUDIT	20	3	11	14
TOTAL	34	4	16	20

Source: own processing

### **5.An interpretation of the results, perspectives and expectances on the role of the financial audit in Romania**

Next we will try to relate the statements inside the questionnaire and to underline a series of particularities noticed as a result of the global analyses of the answers. We want for this research to go further from the own meaning of the obtained values as an answer to the established statements inside the questionnaire and to underline new ideas and perspectives on the profession of auditor in Romania.

If we talk about the perspectives that the financial managers and the users of the audited accounting information have on the legal responsibilities of the auditors, we can say that part of them have demonstrated that they do not know the present legal norms.

For example, 15% of the financial managers and 10% of the users of the audited accounting information do not know the fact that doing the audited financial situations is not the responsibility of the financial auditor. ISA 700 which is applied in Romania, in art. 26 specify that this has to be stated in every Audit Report, in the section named "The responsibility of the management for the financial situations" in which the auditor "must include an explanation of the fact that the management is responsible for making the financial situations".

The legal regulations connected to the responsibility of the auditor towards revising entirely of the accounting for the audited firm are not known by 23% of the financial managers and the users of the audited accounting information from Romania.

According to ISA 200 the sufficiency of the evidence „is a measure regarding the quantity of audit evidence. The necessary quantity of audit evidence is affected by the evaluation of the auditor regarding the risk of significance devaluation and also by the quality of some audit evidence". According to ISA 530 this way of work "treats

using by the auditor of statistic and non statistic sampling" which will "give the auditor a reasonable basis to formulate conclusions regarding the whole population".

Another example of not knowing the legal regulations in Romania is the fact that 15% of the users do not know that the auditor has the responsibility of checking if the financial situations express the clear image of the financial economic situation, in agreement to the generally accepted accounting principles.

Regarding the responsibility of the auditor of detecting fraud and irregularities in the audited firm it is noticed a taught not-knowing of the legal regulations, by 48% of the financial managers and 63% of the users. The responsibility of the auditor in front of the fraud is a very controversial theme in the history of the audit.

Not a single control system can eliminate the fraud risk that is why we have to take into consideration that it is impossible to guarantee 100%. From here the low level of trust" In the new international context the statutory auditor's mission is more complicated every day, but it must not be forgotten the fact that the audit is not a panacea... it is not a guarantee against fraud, but a modest "assurance source" (Domnişoru, Briciu, 2012).

We must remember the fact that the responsibility for preventing and detecting the errors and fraud belongs to the management of the firm, with the help of the internal control, and "the fact that annually they call for audit, can be considered a means of detecting, preventing or discouraging it" (Domnişoru, 2011).

Next we will talk about the expectancies that the three groups have on the work of the financial auditor. Not knowing the legal representations determines from the financial auditors and from the users of accounting information non-realistic expectancies which in the specialty literature are called "unreasonable expectation gap". We can say that one of the main functions of the auditors, if not the most important, is the public interest one or the social one. Therefore "the auditor serves the society" (Fermin de Valle, 2007), improving the market efficacy and of the society in general.

As a result of the analyses made with the help of Kruskal Wallis Test of the statements referring to extending the responsibilities of the auditor, have resulted significant differences between the three groups participant in the study. Generally the financial auditors refuse new responsibilities, while the other two groups express the expectancies referring to the information that they would like to find inside the Audit Report. 38% of the auditors do not want to pronounce on the efficacy of the market way of the audited firm, 34% do not want to pronounce on the future evolution of the firm, 23% on the profitability of the firm and 31% on the solvency.

The group of users is the one that asks in a higher percent the extending of the auditors' tasks. 49% want the extending of the auditors' tasks so that to pronounce on the efficacy of the market of the firm, 35% on the future evolution of the firm, 38% on the profitability and 38% on the solvency of the firm.

Concerning the future evolution of the firm ISA 570 in art 7 states that "the auditor cannot foresee this kind of events or future conditions". The auditor can "based on the obtained audit evidence" draw conclusions "if there is a significant incertitude towards events or future conditions that might leave place for doubt regarding the entity ability to continue its activity", but his objective inside the mission is "to get enough and adequate evidence regarding the degree of applying the presumption of continuing the activity by the management" in preparing and presenting the financial situations.

Moreover ISA 570 in art 5 states that "any ratio regarding the future is based on available information at the moment of doing this ratio". The following events "might have results that are not according to the ratios that have been reasonable at a certain moment when they have been expressed". To conclude, 35% of the users of the audited accounting situations and 31% of the managers of the audited firms in Romania declare that there is a feeling of in satisfaction regarding concerning the role and objectives of the audit. 43% of the financial users are aware that there is that feeling, therefore 64% of the auditors think that the users wait "too much" from them.

## **6.Perspectives and expectations on the utility of the financial audit in Romania**

The content of the audit was slowly brought to the light and has confirmed the fact that it represents a social necessity. The audit reports are destined to guarantee the transparency of the accounting situations in front of their users, who use them in taking decisions and condition the efficacy of the decisions adopted by different agents from the business environment and therefore the correct working of the market.

One of the statements of the questionnaire refers to the stakeholders of the audited accounting information, to those who ask for the financial situations of the audited firms, namely: shareholders, clients, financial entities, assurance companies, suppliers, Public Administration, financial analysts and employees.

Though from Kruskal Wallis Test there are differences between the three groups participant in the study, it has not been noticed a strong polarisation of the answers. The centralisation of the answers has demonstrated that the categories of users recognised in Romania are: shareholders, financial entities and financial analysts, and the categories less recognised as users of the audited accounting information are the suppliers and the employees.

The next statements group refers to the perspectives of the three categories interested in the auditor's work on some themes connected with the importance and utility of the financial audit. As a result of the analyses made by the help of Kruskal Wallis Test has resulted a certain polarisation of the answers:

Regarding the statement that the financial situations show the clear image of the firm we notice that 90% of the financial managers express their agreement with this statement while 55% between the auditors and 56% of the users express a moderate agreement.

A strong controversial topic is being produced for the statement that the financial audit brings "an added value" to the audited firm. 83% of the auditors agree to it while the financial auditors do not. From here starts the disagreement for the following statement in which 77% from the auditors think that the cost of the financial audit is justified while only 29% of the financial managers of the firms agree to this statement. When we refer to the statement that "the cost of the financial audit is justified in Romania, we take into consideration the fact that the E.O. 90/2008 in art. 27 will state that the fees must be "adequate for the activity that is to be done". The National Ethic Code of the Professional Counters in Romania inside paragraph 200.8 talks about the threatening of "intimidation". One of the examples from this perspective is the case of a firm "on which there is a lot of pressure to reduce the quantity of work only to reduce in fact the fees". Also, the level of the fee might represent a threat at

the professional competence and prudence. The National Ethic Code of the Professional Accountants in Romania in paragraph 240.1 states the situation in which "a lower fee" can lead to the impossibility of realising a mission "according to the technical and professional applicable standards".

A consequence of these differences of perspectives is also the answers which refer to the fact that the financial audit is realised only in the case in which it represents a legal obligation. About 50% of all three categories agree to this statement.

The following questions get general opinions of the three groups referring to the utility of the financial audit:

Referring to the statement that "the financial audit offers a good protection against fraud" as a result of applying the Kruskal Wallis Test have resulted insignificant differences between the three groups, which have expressed a moderate agreement, with an average value of the answers between 2,56 and 2,64. We can say that the auditor's function against fraud has not been constant, but it has suffered modifications in time and space. Today the role of the auditor is not to detect fraud, even if the nature of his job is to discover it.

What is really important for our case is the fact that one of the most important functions of the internal control is that of "bringing security towards the fact that fraud and irregularities can be discovered in due time, assuring in this way the integrity of the accounting registers".

The auditor when plans the evidence which will do inside the mission considers the following things: what types of mistakes makes, what types of fraud or irregularities can be produced, determining the procedures of internal control that can be prevented or detected, if these procedures are functional inside the firm and evaluating the fact if the procedures of internal control cover all kinds of fraud and irregularities that can be produced. Therefore it can be drawn the conclusion that the financial audit even if it does not look directly fraud and irregularities, offers a good protection against them.

For the statement according to which realising a financial audit mission in general takes longer the perspectives of the auditors, of the financial auditors, of the financial managers and of the users of the information for a significance threshold of 1%. The financial managers see the audit mission in terms of costs. For them it represents the number of hours multiplied to the hour, while for financial auditors the audit mission represents responsibility, a limited period of time in which to organise the work efficiently so that to be able to give a reasonable assurance that the financial situations show a clear image of the firm.

The possibility of raising the legal audit limits for firms would lead to dropping the audit market. In Romania the incomes of the physical persons are quite small, what makes for the small and middle size not to reach so easily the compulsory audit limits. We must not forget that in Romania the audit compulsory limits are higher than in other European countries, so there are audited a lower number of firms.

As a conclusion I think that it is necessary a closing of the positions of the financial auditors with that of the users of the audited accounting information. What is to be seen anyway is the fact that in Romania the positions are not as strong, there is not a strong polarisation of the answers (the average value does not closet o 1 nor by 5, but the majority are between 2 and 4). This thing shows the fact that there are problems and in satisfactions regarding the role and utility of the financial audit, there

is a feeling of in satisfaction from the users, but they are aware of his existence by the financial auditors.

The actual differences of perspectives determine future expectations on the auditors 'work. As global analyses of the answers from the questionnaire we have divided expectations of the users of audited accounting information in two categories: realistic and non-realistic.

## **7.Conclusions**

The study of the financial audit and of the perspectives and expectations which there are about this supposes realising a connection between what the financial audit does and what the users think they should do. The controversial discussions on this theme have lasted for more than 30 years under the name of "audit expectation gap". Realising an empiric study of this kind in Romania represents something new, a step forward in the process of improving the quality of financial information.

The realised research has allowed demonstrating the hypothesis according to which there are differences between expectations and perspectives from the financial auditors, managers of audited firms and the users of audited accounting information regarding the role and the utility of the financial audit.

By the help of Kruskal Wallis Test it has been demonstrated that in 59% of the questionnaire statements referring the role and utility of the financial audit there are significant differences between perspectives and expectances between the three groups in Romania.

The Regulation proposed contains measures to improve the independence of auditors, to avoid conflict of interest, reinforce professional skepticism against fraud and error and proposes measures to extend the information provided by external users through the audit report. Countries members of the EU will be able to add to a national level those measures it deems necessary in accordance with the national specifics or realities of each country.

The financial audit has progressed and perfection itself at the same time to the economic development, as an answer to the society challenges, It has progressed from the historical point of view, being present in a certain form in all the periods, from the concept point of view and mostly from the objectives point of view. Therefore I believe that the auditors and the audit firms shouldn't pass over the social importance that is given today to the financial audit, the position obtained today in the society after hundreds of years of efforts and to enlarge the area of responsibilities, look for new methods or procedures compatible to the actual needs, which would come in the users support.

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**SECTION: MANAGEMENT, MARKETING, ECONOMIC  
INFORMATICS AND CYBERNETICS**

***SUB-SECTION: MANAGEMENT***



# INTEGRATED INFORMATICS SYSTEM FOR PUBLIC MANAGEMENT

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**Abstract:** *This paper presents Integrated informatics systems for public management and the implementation of the institutional architecture in public administration. Being implemented in Baia Mare City Hall, institutional architecture reunites the quality and environment management systems and the integrated informatics system into a uniquely assembled concept able to sustain the administration's activity in real time. For the strategic planning at the town level to be relevant, effective and efficient, the public administration authorities must take into account the importance of conducting certain analyses and of some strategic documents at neighbourhood level. The Urban Development Integrated Plan of the city of Baia Mare, is aimed at the public intervention on a well-defined area needing regeneration because of social, economic, territorial, functional and environmental discrepancies, as compared to other urban areas of the municipality. The perspective of the Urban Observer has as its basis on the permanent monitoring of urban indicators as well as the implication of all interested parties, including the citizens in view of defining the strategic directions of town development.*

**Keywords:** *informatics system, sustainable development, strategies, the institutional architecture, models*

**JEL classification:** *J11, R11, R23*

## 1. Introduction

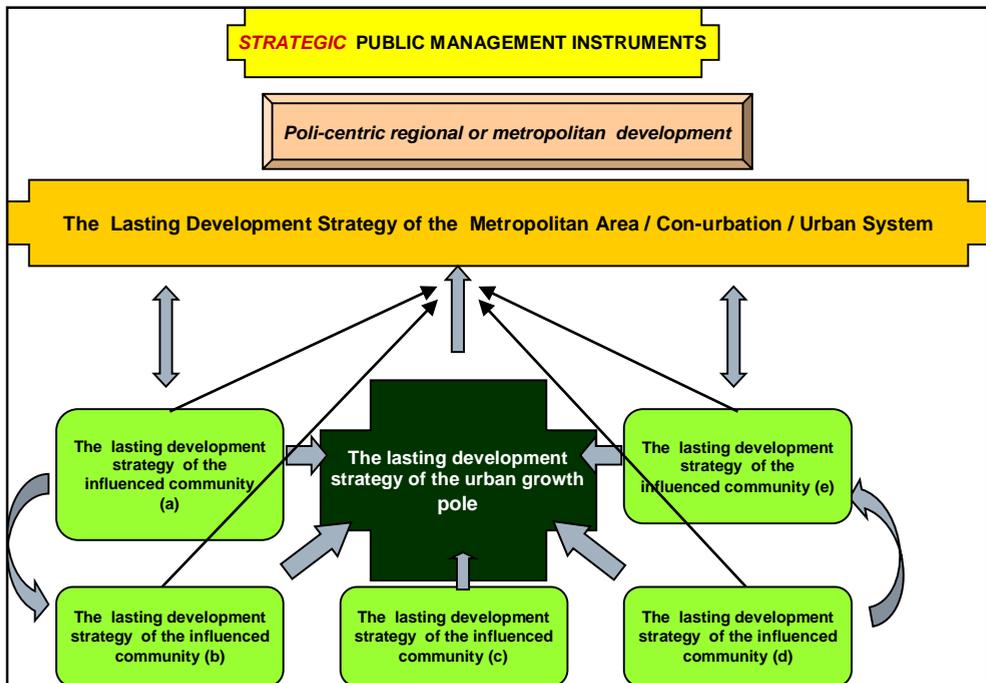
Integrated informational system is a dynamic tool that achieves a constant contact with the realities of the social environment it serves. As the operational tool of the public management, integrated informational system enables real-time monitoring of all activities and facilitates the development of an innovative management based on real time information allowing the processes and decision-making to be fully automated (Malhotra, 2005). Implementation of integrated informational systems in public administration is imposed by the lack of an objective analysis tool, quick and interdisciplinary support decisions that can substantiate strategies at regional level (Applen, 2002).

The concept of the Urban Observer has an extremely ample area of active structures at all territorial levels (national, regional, county level, town level, neighborhood level) in the field of urban development. Being experimented in the field of integrated and participative strategic planning in Romania, the Baia Mare municipality has created a model of Urban Observer in the local context specific to Romanian cities. In this context Baia Mare city has promoted a participative planning process, innovative for cities in Romania in which there has been conducted the analysis of needs and the

potential of the municipality neighborhoods. Another element of novelty which permits the rapid visualization of the main problems identified in each neighborhood is the utilization of thematic maps which accompany the quantitative description of data, such as (Anghel, 2006; Anghel, 2013):

- the map of population density in the neighborhoods
- the map of social risk in the neighborhoods
- the map estimating the unemployment rate in the neighborhoods
- the map of real estate value in the neighborhoods
- the map regarding levels of in the neighborhoods.

The development strategy of a local community represents the determining of long-term goals and objectives of collectivities, adopting local policies and allotting resources to complete those, taking into account the citizens' needs, expectancies and wishes and the components of the local political system (Rosenbloom, 2004). From the point of view of strategic management the instruments proposed within this paper envisage a three-dimensional approach of processes: the urban dimension, the zone of influence or the supra-urban dimension and the sub-urban dimension.



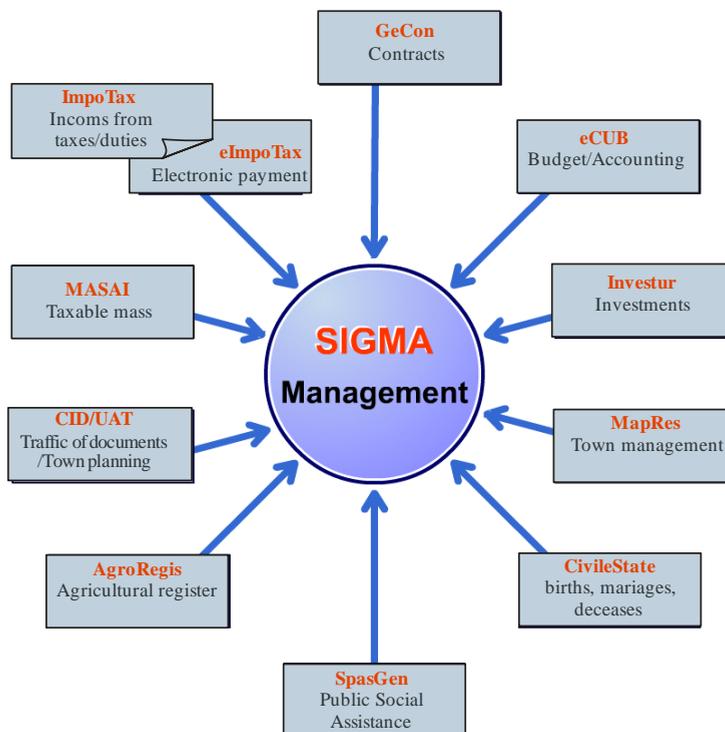
**Figure 1:** Analysis of supra-urban development in relation to a growth pole  
 Source: Anghel, 2013

## 2. Integrated informatics systems for public management, implementation of the institutional architecture in public administration

The system includes the assembly of data and information from local and central public administration documents, information circuits, fluxes and procedures as well as means of dealing with information (Radulescu, 2010; Alavi & Leidner, 2001).

Seen from the managerial point of view, the information system can be considered one of the main components of the real time governance of administrative institutions. It has the role to implement the concept of e-governance, according to the e-Administration National Action Plan (Aitken, 2003; Benston *et al.*, 2004).

GIS Urban – SIGMA, applied in Baia Mare City Hall is an integrated informatics system resulted from implementing a solution to interconnect specialized independent informatics components with the purpose of standardizing and jointly using the information found in different modules, and also for compiling the data obtained from various sources in order to obtain inter - department reports or statistics (Mullins, 2001; Matei, 2009).



**Figure 2:** Management of SIGMA processes

Source: Anghel, 2013

The development of inter – institutional cross-operation has been defined by the “e-Europe Action Plan 2005”, during the Seville Summit. Institutional architecture, the basic component of cross-operation, reunites all organizational architecture models according to institutional categories and activity areas.



- Building a “workshop”, permanently open to all interested parties in the field of developing urban, sector and territorial indicators.
- Building a monitoring system for urban development strategies and policies
- Setting the basis for making relevant statistic comparisons between urban indicators at county, regional, national, European and world level.

Through an efficient management of the Urban Observatory, a *Plan of Measures* can be developed at neighborhood level. This plan represents the development and life quality increase vision for this neighborhood.

Due to the fact that a plan of measures for a well defined space has to be acknowledged and implemented by all stakeholders (citizens, associations of owners, businesses, NGOs, public administration), the way of acknowledging and institutionalizing this Plan of Measures can be through a *Neighborhood Contract*.

This *Neighborhood Contract* is based on:

- Justifying and analyzing problems, developed in the Urban Observatory;
- Identifying adequate solutions for the Community through the CIVIC instrument;
- Planning action implementation, granting resources and establishing a corporate type responsibility;
- Acknowledging the granted responsibilities by all stakeholders.

The implementation of this Contract in Baia Mare City began in 2003, with the CIVIC project (Creativity, Initiative, Volunteering, Involvement, Consultation), and the year 2010 brought into discussion the implementation of Neighborhood Contracts.

Partnership technique has been used for the nominations. Thus, we have chosen a less sophisticated procedure and we have created the possibility for the educated in the field to promote those names, people and/or groups who have contributed to the sustainable development of the community through their activity.

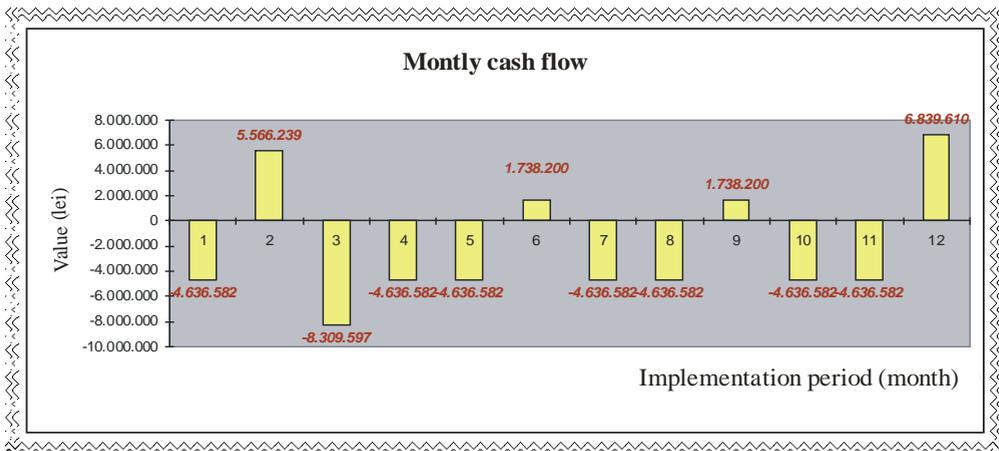
CiViC events that followed from 2003 to 2010, aimed at fields such as: School system, Architecture, Cults, Education, Art, completed by a meeting between CiViC and members of Parliament. In the years that followed up to now, the number of fields aimed for integration in the CiViC concept has grown, adding the following to the ones already mentioned: Sports, Mass-media, Businesses, NGO, Health, Economic, Urbanism, Strategy, Tourism, Youth.

Using key factors such as “performance recognition” and “continuous competition between values”, the CiViC concept has contributed to the development of communication between Local Public Administration and the Community, has promoted intellectual and industrial values, has integrated as much as possible the idea of transparency, has created strong structures in the sustainable development process.

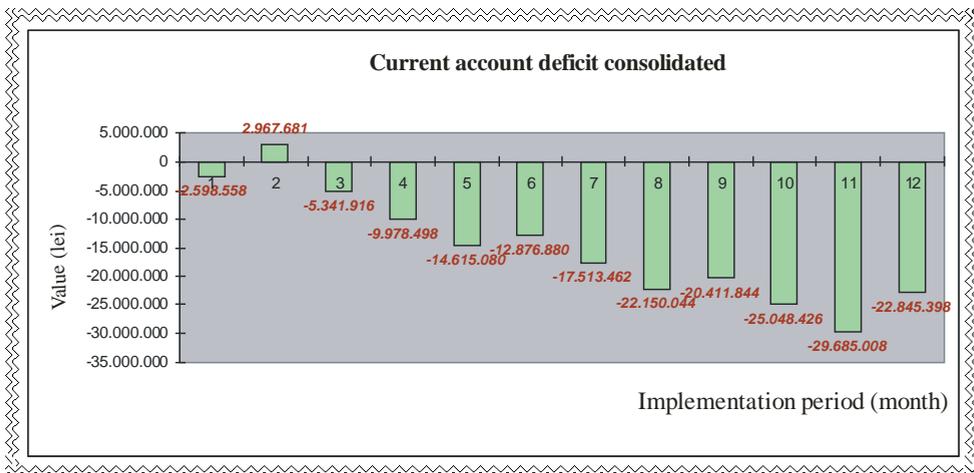
*The multi annual investment program* creates the premises of using resources in obtaining priority objectives by establishing the link between development strategy and annual budgets, as well as between financial programming and the execution of investment objectives.

Developed and implemented in Baia Mare city, the program ensures the link between local budgets and its expected allocations, action plan and city development strategy, offering predictability in development and socio-economic stability.

The graphical distribution of these total costs, analysed monthly during a year of implementation is presented below:



**Figure 4:** Monthly cash flow for year II of implementation  
Source: Anghel, 2013



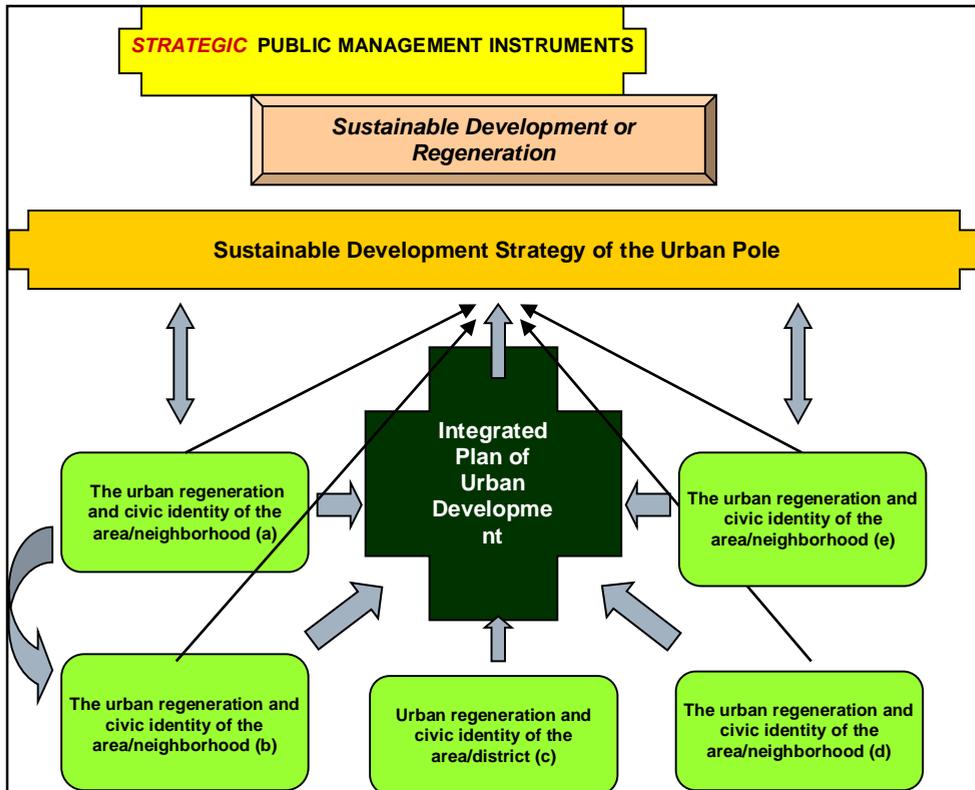
**Figure 5:** Current account deficit consolidated for year II of implementation  
Source: Anghel, 2013

Using these instruments of planning major investment, the predicted effort of public funds management can be controlled and optimally ensured.

#### 4. Integrated Plans of Urban Regeneration

To this purpose the *Integrated Plans of Urban Regeneration* were defined as a modern strategic management instrument, meant to ensure the diminishment of discrepancies regarding life quality and of the urban environment within the reference territorial units. The case study for this type of instrument consists of the Integrated Plan of Urban Regeneration “Phoenix”, a plan which envisages the largest “dormitory-type” neighborhood of Baia Mare, which, at the moment signals problems in the infrastructure field and public services, problems of cohesion and

social inclusion and the lack of an economic development specific to the intervention area. The disadvantages of such an approach are the concentration of public interventions in a well-defined urban area to the detriment of other urban areas that require interventions in an extended conceptual analysis (Choo & Bontis, 2002; O'Sullivan, 2007; Scott, 2002); a representation of the application or urban regeneration at the level of the entire community is represented as follows:



**Figure 6:** The analysis of the sub-urban development in relation to the entire local community  
 Source: Anghel, 2013

Within the urban ensemble of Baia Mare, the Vasile Alecsandri area and the area of the Old Town Centre are distinctly identified as integrated urban areas with mono-directed functions, positioned as an interface between the multi-functional urban space and the future residential areas of the mono-family type.

In this context, the functional approach of a Master Plan of urban regeneration for this area offers a series of competitive advantages on a long and medium-term, the most important being the following (Anghel, 2013):

- The integrated approach of some functional urban areas, in relation to the neighborhood creates the premises of a balanced, long-term sustainable development;

- The identification and the allotment of a social, cultural and administrative identity to an urban zone lead in perspective to social stability and an increase in the predictable competitiveness of any zone;
- The decentralization of administrative, economic and social functions at an urban level is the tendency of the third millennium, at all levels this optimal endeavor being correlated with the increase in the cooperation capacities and the social dialogue in a globalization world;
- The credibility of some long-term strategic projections not only renders more efficient the resources allotted for their completion, but also creates a favorable environment for an increase in the level of life quality due to the elimination of some development risks;
- The capacity to integrate distinct measures and actions having the same direct beneficiaries leads to the sustainability of long-term planning of certain objectives, the results and impact on a short- and medium term being synergic and comprehensive for these beneficiaries;

The instruments used were mainly those promoted by the public administration, these having the role to offer consistency to private and public policies. The decisive role of public management in the near future is to build the “frame” for the social and economic development of a well-defined space.

This space must address not only the local identity values (cultural, economic, social of natural and built frame), but also the major challenges linked to the phenomena of globalization or the degradation of the environment.

## 5. Conclusion

The adaptation of the Urban Observer in the processes of strategic planning starts from the analysis of disparities and specific needs existent at the neighborhood level in view to ensure a balanced development of the territory as well as a pertinent answer to the citizens' demands, most of the times complex and well-founded and which can be integrally included within the development plans of cities.

Considering the need for an integrated approach of the project portfolio for the Baia Mare Integrated Urban Development Plan, both from the perspective of integrated project and the functional relations between them, it is imperative that the assembled interventions prove synergy in their impact and results.

Thus, the implementation of the Baia Mare City Integrated Urban Development Plan, simultaneously implementing 8 large infrastructure projects, has been financially analysed taking into account the granting of pre-funding, reimbursement charts, work execution charts and the due costs for a planned implementation for a period of 4 years.

The Integrated Urban Regeneration Plan applied in Baia Mare city for a “contiguous” area is *structured* on objectives, development axis, major intervention fields, measures and distinct actions *responding in an integrated manner* to the social, economic, habitat or environment problems of the identified area.

The implementation of the Integrated Plan is a *long-term aim, integrated territory* approach converging with the sector approaches and directly contributing to the implementation of Baia Mare City Sustainable Development Strategy.

The role of “community facilitator” of the city, between the development potential of a metropolitan type and the suburban areas showing deficiencies in life quality, has successfully been demonstrated within the Baia Mare municipality. Both the Urban

System Baia Mare and the urban zone Vasile Alecsandri were conducted by the values and principles developed through the 21 Local Agenda. The distinct approach of these values led to the creation of a self-identity, both on urban and metropolitan levels, which should allow the realization of a common vision for implementing durability.

Through developing a set of integrated measures, applied at the level of a well-defined urban zone, a public intervention can be developed to answer all the long-term necessities of that community.

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# EUROPEAN UNION ENLARGEMENT AS A CULTURAL SHOCK. THE ROLE OF INTERCULTURAL TEAMS' MANAGEMENT IN INCREASING EUROPEAN COHESION

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**Abstract:** *The European Union is challenged nowadays by a dramatic multilevel process of integration. The Europe 2020 strategy promoting smart, sustainable and inclusive growth is defined by a set of ambitious objectives to be reached by 2020. On the other hand, the turbulent times of the economic crisis put even more pressure on the integration process. The success of this complex endeavor is heavily depending on the dimension of the cohesion specific to each of levels of the process. The cohesion of the European Union (EU) is stronger at macro (societal) level with regard to institutional, political, and economical dimensions. The cohesion of the European Union is less strong at micro level, the level of people, of the common individual, of the citizen. In other words, EU system has less cohesion at the level of individual and social fabric. An interesting hypothesis about EU enlargement is that every new "wave" of countries is a collective cultural shock for the European citizens. In conclusion, considering the history of the European Union, their citizens were subject to a constant flow of "cultural shocks", following each new EU enlargement though admission of new member states: the big lot of 10 new countries in 2004, Romania and Bulgaria in 2007. In this respect, immigrations waves from new member countries have preceded their country accession, and to various extents, have made a first impact on the host countries culture. This paper is discussing the issue of increasing European cohesion based on a management approach. It describes the positioning of Romania on the European map of cultures, in order to identify the convergence and divergence of its societal culture with various European cultural clusters. We are arguing that: a) European organizations have a major role to play in the process of increasing cohesion within the European Union (EU); b) Organizational Management and leadership are paramount to their success and to society welfare; c) Intercultural Knowledge Management is needed for achieving the high performance of the European organizations; d) Intercultural teams are one of the most effective ways to reduce the current cohesion-less of EU, both at individual and organizational level.*

**Keywords:** European Union enlargement, cohesion, cultural clusters, Intercultural Knowledge Management.

**JEL classification:** A14; O52; Z13.

## **1. European Union enlargement as a cultural shock**

The European Union is challenged nowadays by a dramatic multilevel process of integration. The Europe 2020 strategy promoting smart, sustainable and inclusive growth is defined by a set of ambitious objectives to be reached by 2020. On the other hand, the turbulent times of the economic crisis put even more pressure on the integration process. The success of this complex endeavor is heavily depending on the dimension of the cohesion specific to each of levels of the process.

Cohesion is the feature of a whole system which has all the component subsystems closely united (Larousse, 2011). It is mostly considered a result of an action, process. It is, also, an important characteristic of the structure of the system. Cohesion is defined, also, as "The act or process of holding together firmly as parts of the same mass, of adhering one to each other, and of becoming united in ideas or interests" (Longman Dictionary, 1995). Cohesion is multiple foundations-based, such as categories of links between component subsystems of society/organization: technological, social, managerial, economical, legal, political, cultural. The opposite of cohesion is cohesion-less, in which the links between subsystems are quite weak. However, the links should be strong enough to allow the system to exist and function as a whole. More cohesion means a stronger link between components of the system that is more bonding and increased stickiness.

The cohesion of the European Union (EU) is stronger at macro (societal) level with regard to institutional, political, and economical dimensions. The cohesion of the European Union is less strong at micro level, the level of people, of the common individual, of the citizen. In other words, EU system has less cohesion at the level of individual and social fabric. In this respect, there are many barriers to cohesion due to divergence on interests, to cultural differences, and to historical factors. Based on the nature of factors considered, there are several types of cohesion. The one that will be discussed here will be the cultural factor, which has been longtime considered to be a secondary factor by the politicians and administrators of the European Union.

There are strong arguments why the process of building the European Union, in the historical context of the 1950's in Europe and in the world, was very pragmatic, starting at macro-economic level. Hard systems such these are easier to build and reap positive outcomes as compared to soft systems, such as socio-cultural system. An interesting hypothesis about EU enlargement is that every new "wave" of countries is a collective cultural shock for the European citizens. Fink and Holden (2002) pointed out a similar process when Central and Eastern European countries experienced a collective cultural shock after the collapse of the communism in their respective countries. It took EU member states several years to understand such phenomenon and adopt the strategy of integration into EU in order to avoid the marginalization of these former communist countries.

In conclusion, considering the history of the European Union, their citizens were subject to a constant flow of "cultural shocks", following each new EU enlargement though admission of new member states: the big lot of 10 new countries in 2004, Romania and Bulgaria in 2007. In this respect, immigrations waves from new member countries have preceded their country accession, and to various extents, have made a first impact on the host countries culture.

On the other hand, we point out that economic cooperation, local government cooperation, nongovernmental organizations cooperation also have had a

significant impact on increasing cultural awareness of people from various European cultures. Whatever would be the type of institution they are acting in, individuals doing together very different activities, aiming at various outcomes, in various forms, represent a very important way of improving European cohesiveness at social and cultural level.

The GLOBE studies findings point out that there is not a single common European culture for Europe as a whole (House et al., 2004). Also, Hofstede (2001) reached the same conclusion. The first differentiation considers two big regions in Europe: the first one is North Western Europe from Great Britain to Austria, and the second one is South Eastern Europe from Spain to Georgia, through Central Europe (Koopman et al., 1999). The next level of differentiation indicates the existence of several European cultural clusters, grouping countries based on cultural proximity, such as: Anglo, Eastern Europe, German Europe, Latin Europe, Nordic Europe cluster. Diversity exists in Europe, and it will exist for some time in the future, as the societal values level indicates.

As demonstrated by Hofstede (2001), and GLOBE studies (House et al., 2004) there is a convergence between European clusters at values level (Annex 1). The Romanian GLOBE score (Bibu et al., 2007) for values is the result of the Romania GLOBE research executed by a large group of Academics under the coordination of GLOBE representatives in 2006. The European clusters common features are: reduced power distance actually very low, increased in group collectivism to a very high level, increased humane orientation to a high level, increased performance orientation to a very high level, (exception is Romania), increased Future orientation to a high level, increased gender egalitarianism to a medium to high level, increased Institutional collectivism, with exception of Nordic Europe. For the other two dimensions: Assertiveness level is decreasing remaining still in the medium range, exception is Eastern Europe and Romania, where it is highly increasing; Uncertainty Avoidance where Eastern Europe and to a slighter level, Latin Europe, desire more of it, while the rest of Europe want less of it.

## **2. Looking for solutions**

The preferred solution by European Union Commission is summed up in the axiom “Unity in diversity”. We consider that unity in diversity could become a major source and factor of progress, once and if it is acknowledged by more and more Europeans as desirable and positive.

Europe’s most spectacular achievements are tangible: the internal market, the Euro, the agricultural policy. These are means to achieve a more cohesive and integrated European Union, at the structural level. However, these things touch only the minds of EU citizens, not their hearts. As Jacques Delors, a former President of the European Commission, said: “You can’t fall in love with the single market. We need to bring Europe—its values, its debates and its policies—closer to the citizen.” The leaders of the European Union are realizing that winning the hearts of the European citizens, as much as their minds, is of main importance. They need to address the “soul” of the Europeans. The return to cultural and political values in Europe will avoid confusing means and ends.

The most important way to create European ownership is intercultural dialogue between Europeans. Recognizing Europe’s cultural diversity lies at the foundation of the European Union Commission’s idea of intercultural dialogue. The European

Union's increasing diversity is considered to represent an asset, not a threat or a problem. It is clearly stated that "the fundamental challenge of our process of [European Union] integration is in fact how to preserve distinct cultural identities while developing a multicultural society." (Figel, 2006).

Our main research question is the following: How to act to increase cohesion in Europe, at individual and organizational level?

Our main assumptions are based on a managerial approach, based on the following assumptions:

1. European organizations, including businesses, social economy organizations, public organizations and various hybrid forms, play a major role in the process of increasing European cohesion at group and individual level.

2. Intercultural teams are one of the most effective ways to reduce the current cohesion-less of EU at individual and organizational level. (Bibu, 2007).

2. Organizational Management and Leadership knowledge are paramount to their success and to society's welfare

3. Intercultural Knowledge Management is needed for achieving the high performance of the European organizations.

4. Teams are organized networks supporting the organization's mission, goals and strategy through creating, acquiring and transferring knowledge. There are new kinds of intercultural forms of teams such as intercultural project teams evolving towards becoming "project teams-based organizations". A relevant example is EMES, initially a project on the emergence of social enterprises in Europe, started in 1996 by an international group of scholars, which nowadays is formally established as a non-profit association.

There is also a shift from traditional model of building cross-cultural teams to improved models of building multicultural virtual teams for knowledge creation (like the committees organizing international academic conferences). Multicultural teams are diverse and hence their potential for creativity is higher than culturally homogenous teams. To maximize its use through synergistic effects, team members should be encouraged and supported to create common solutions in a collaborative manner to achieve their task effectively and efficiently.

Intercultural Knowledge management (IKM) is the collaborative knowledge creation, knowledge sharing and organizational learning that happen in an intercultural organizational setting, such as an international organization, international team or among international organizations (Holden, 2002). It involves individuals belonging to various cultures, national cultures mainly, working collectively, face to face or virtual, to achieve a common purpose.

Intercultural Knowledge Management principles in teams are the following:

1. Knowledge originates and resides in people's minds.

2. Teams are well suited to extract knowledge from the minds of members,

3. Maximizing explicit knowledge could be a measure of highly performing teams.

4. The creation, sharing and transfer of intercultural know-how through participative competence is the key to reach high performance in intercultural teams, in addition to all the other factors specific to homogenous teams.

5. Information Technology is well placed to support this process, if well designed and used.

6. Technology enables Intercultural Knowledge Management. When "technology" is associated with new forms of "organization" that fit to each other and both are fine

tuned to “people”, than that organization is in harmony and fit for performing at high level according to the anthropocentric model of organizations, “People-Organization-Technology”.

### **3. Research methodology**

The paper has explored the literature and formulated the main research questions, its assumptions from a managerial perspective, and future research directions in the field of the role of intercultural teams in increasing European identity.

A field research using a mixed research method, quantitative and qualitative, related to intercultural teams in European financed multicultural projects, involving actors from various European countries represents the next step.

### **4. Conclusions**

Our final conclusions are the following:

1. Intercultural teams using modern information technology, including IKM Portals are one of the modern forms of work organization for knowledge creation, sharing and using within an organization, and among different organizations
2. In order to increase their cohesion, and to contribute to the increase of European Union cohesion, European organizations should use extensively intercultural teams, and learn in the process to amplify the potential existing in diversity in order to increase European unity.
3. European organizations should use modern technology and modern forms of knowledge creation, sharing and using co-creatively, such as Knowledge Management Support Systems, mainly Intercultural Knowledge Management Portal (Brandas, 2003).

## APPENDIX 1

### Comparison between Romania and other clusters

Societal Variable	Romania	Eastern Europe	Latin Europe	German Europe	Nordic Europe	Anglo culture	World average
<b>As is (Practices)</b>							
1. Power Distance	5.63	5.25	5.21	4.95	4.54	4.97	5.17
2. Uncertainty Avoidance	3.66	3.57	4.18	5.12	5.19	4.42	4.16
3. Institutional Collectivism	3.75	4.08	4.01	4.03	4.88	4.46	4.25
4. In group Collectivism	5.43	5.53	4.80	4.21	3.75	4.30	5.13
5. Gender Egalitarianism	3.88	3.84	3.36	3.14	3.71	3.40	3.37
6. Assertiveness	4.14	3.51	3.99	4.55	3.66	4.14	4.14
7. Humane Orientation	4.09	3.84	3.71	3.55	4.17	4.20	4.09
8. Performance Orientation	3.51	3.71	3.94	4.41	3.92	4.37	4.10
9. Future Orientation	3.33	3.37	3.68	4.40	4.36	4.08	3.85
<b>Should be (Values)</b>							
1. Power Distance	2.78	2.84	2.57	2.51	2.55	2.86	2.75
2. Uncertainty Avoidance	5.39	4.93	4.36	3.46	3.76	4.09	4.62
3. Institutional Collectivism	4.98	4.33	4.84	4.69	4.08	4.32	4.72
4. In group Collectivism	6.12	5.56	5.66	5.16	5.65	5.84	5.66
5. Gender Egalitarianism	4.63	4.46	4.77	4.91	4.82	4.90	4.51
6. Assertiveness	4.53	3.88	3.72	3.07	3.56	3.89	3.82

7. Humane Orientation	5.30	5.41	5.58	5.48	5.64	5.40	5.42
8. Performance Orientation	4.92	5.81	5.94	5.90	5.84	6.03	5.94
9. Future Orientation	5.56	5.37	5.33	5.01	4.76	5.33	5.48

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## ASPECTS OF THE ASSOCIATION OF EFFECTIVE TEAM RELATED VARIABLES IN THE MANAGEMENT OF INTERCULTURAL WORK TEAMS IN MULTINATIONAL COMPANIES

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**Abstract** *Various phenomena generated by the new context of globalization have focused our research interest towards studying in what ways management of Intercultural Work teams (IWT) could and should contribute to the increase of their performance at work. Despite the recognition of the fact that many MNCs fail in the management of IWTs, there is still a significant knowledge gap about their non-functionalities. Managerial literature „blames” national and organizational culture differences for the failure of this process. This is because each member brings his own style of work, with his own way of ensuring effective cooperation, making difficult to identify a clear recipe of a team organization and management in intercultural context. Teamwork, managing work teams made the subject of numerous researchers from many fields, denoting so difficult exercise in practice. However, we have identified high performance IWTs whose members are from different countries. Therefore, we assume that their management identified and used methods and instruments able to ensuring IWT performance. If we look at international research, intercultural teams management models have a reductionist and not holistic approach, namely stochastic in terms of selection of specific cultural dimensions cultural models specific to the interest of the researcher. In contrast, in Romania, intercultural management and intercultural management teams performance is less studied. The research presented below is set up to be a part of a pilot study, an exploratory research of how intercultural management assigned dimensions are directly related to the concept of EIA performance dimensions assigned. Our assumption for the empirical research is the following: work team performance (effective, efficient, with a high degree of satisfaction of its members) is the result of application performance management in the context of a particular style of interaction specific team. Because the dependent variables were nominal variables, and due to small size of the sample (10 managers and 33 employees), we applied „non-parametrical tests considered the only relevant tests” (Popa, 2008:214). The research is "degree of association", the independent and dependent variables of the same type. One more reason to choose this model of research is that we cannot claim a causal relationship, but the combination of variables that represent characteristics of a high performance team and not performance indicators. We will not venture to make judgments of causality based on done statistical tests.*

**Keywords:** *intercultural team work, management, intercultural management, model management, effective team, effective team*

**Cod JEL:** *M10, M12, M16*

## 1.Literature review

We are defining intercultural team work (EIA) as a group of three or more individuals who belong to different national cultures, at least two, "with complementary skills, developing a distinct identity, working together in a coordinated and are committed to achieving a common goal whose achievement is considered equally responsible ". (Bibu, 2002)

We hereby mention the models which come to support [the team development process \(Yeh et al., 2006\)](#), *the implementation models* of the highly effective teams (Catska et al., 2001), testing studies for predictability models of the *effectiveness of the team homogenous from cultural point of view (Ross et al., 2008)*, models related to the performance of virtual teams (Courtney et al., 2007). Some authors debate the integral team (Cacioppe & Stace, 2009) and its effectiveness, reviews of decision models (Shetah, 2009) in order to increase the performance of teams, the intercultural competence (Ascalon et al., 2008).

All such researches have tried to explain which could be the causes for the failure of work teams, homogenous or not, from a cultural viewpoint, without offering however, clear theoretical and practical solutions.

An effective team is a team that achieves its tasks and reaches planned and assumed team goals "as is" and at the right moment, meaning as they were planned and in due time.

An effective team has 14 characteristics (Rampersaad, 2006), such as: clear team goals each member agrees to rally, coherence and good intentions, acceptance and considering cultural differences and mutual respect and trust, capability to solve internal problems and conflicts, capability to achieve collective learning, open communication, harmonious work climate and open and correct feedback, harmonious combination of personalities and abilities of team members, based on knowing and accepting by each team member of his own role and the roles of the others, assumed responsibilities and encouraging and stimulating individual and team creativity.

An effective Intercultural Work Team IWT is created and build and maintained in a deliberated manner. The decisive role in this process is played by the team manager. Our opinion (Bibu, 2007) is that in order to build an effective IWT the team manager has to execute at least the following eight activities: 1) to identify and build based on common team values; 2) to foster and achieve full agreement of the team members for the common goals and objectives of the team; 3) to show appreciation for each individual cultural uniqueness; 4) to reward excellent achievements in culturally acceptable ways for each one; 5) to recognize that cultural conflicts exists whenever they happen and to avoid considering each conflict as being culturally based; 6) to learn to become a better member of the team being more open to cultures of team members; 7) to encourage constantly the learning process about all others team members cultural based behaviours, attitude and values in order to make them accept and understand cultural differences in the team, and 8) to use alternative activities to strengthen the team cohesiveness and smothern its processes.

Highly performing work team is a team that is simultaneously effective (doing the right job) , highly efficient (doing right the job) and achieving the highest „quality of worklife”, that is job satisfaction of team members. We define „being efficient” as achieving the desired results with less resources (financial, material, human, time).

Performant management of teams is founded on performing managerial functions and roles in such a manner that the result of the managerial process is an effective, efficient, and high degree of satisfaction of team members. Consequently, the result is a performant team. Comparative study of bibliography related to several conceptual models of performant teams, allowed us to define performant teams as above, in the context of our research.

We consider that the role of performant management is to ensure, on one hand, achieving the desired long-term performance, and, on the other hand, to transform a common team into a highly performance team.

Our research is based first, on the fact that team work is a multidimensional construct, and second, managers have to develop simultaneously both each individual (team member) and the team as a whole.

Our conceptual model proposed by us is presented in Figure 1, on the next page.

Our first assumption for the empirical research is the following : IWT having a high level of performance (Effective, efficient, high degree of work satisfaction of its members) is the results of practicing performant management in the context of a certain interaction style specific to that team (Figure 1).

Our second fundamental assumption is that the performance level of IWT is positively influenced by the fact that the team manager is taking into account the consequences of intercultural characteristics of each member of the team.

## **2. Research methodology**

The respondent group was composed of 10 managers and 33 employees/team members, from countries, while the number of IWT researched was 10 belonging to 3 multinational companies, from 3 countries: Canada, United Kingdom and Germany. The members of IWT are individuals originating from Romania, Germany, England, Italy, Senegal, Guinea, Canada. We administrated one questionnaire to each respondent (so 43 validated questionnaires), and interviewed all the 10 team managers. We synthetised data and undertook the operationalisation of basic constructs, and next we analysed the preliminary analysis of variables, in order to check data validity. Because the dependent variables were nominal variables, and due to small size of the sample (10 managers and 33 employees), we applied „non-parametrical tests considered the only relevant tests”. (Popa, 2008:214) The research is "degree of association", the independent and dependent variables of the same type. One more reason to choose this model of research is that we cannot claim a causal relationship, but the combination of variables that represent characteristics of a high performance team and not performance indicators. We will not venture to make judgments of causality based on statistical tests done, this is conditional upon further research if this will be useful.

<p><b>Team interaction style</b></p> <ul style="list-style-type: none"> <li>○ Construction</li> <li>○ Passivity</li> <li>○ Aggression</li> </ul>	<p><b>Effective team</b></p> <p>Consistency in achieving  Valuing cultural differences  Team teaching  Knowledge of learning ability  Combination of skills  knowing roles  creativity  Harmonious working environment  Mutual respect  Mutual trust  Useful feedback  Resolving conflicts within the team  Timely communication of information it</p>
<p><b>Performance management</b></p> <ul style="list-style-type: none"> <li>• The method used</li> <li>• Planning</li> <li>• Organize</li> <li>• Drive</li> <li>• Control-evaluation</li> <li>• Decision</li> </ul>	<p><b>Efficient team</b></p> <p>Innovation and risk taking  Allowed different opinions  Problem-solving meetings  Information meetings  Meetings for decisions  Specific deadlines  Regular monitoring of the quality  Intolerance to mediocrity  Manager defines team objectives  Manager facilitates team collaboration</p> <p><b>Degree of satisfaction of team members</b></p> <p>Training opportunities and social interaction  Other development opportunities</p>

**Figure 1.** Performant management and the performant Intercultural Work Team  
Source: *own adaptation*

Since this is an artificial construction of the components of the conceptual model, we proceeded to identify the relationship of interdependence existing between input items assigned to each variable and each assigned element of the output variable. In other words, the aim of this stage of empirical research is to identify the existence of association, on one hand, between the variables we have assigned to constructs: intercultural management, performance management, contextual factors (personal characteristics, specific personal style as intercultural competence, leadership style and the style of interaction of the team manager) and on the other hand, of the variables defining the construct intercultural team work performance (effective, efficient, degree of satisfaction of team members).

This logical approach allows the identification of advanced constructs validity, too. Since this is a combination of nominal categorical variables, we chose to apply statistical test Chi-square and Fisher exact test. Because the sample of managers is made of only 10 respondents, we have chosen Chi-square test because it can be used also for a smaller volume of sample (but not less than 8), further increasing the

number of subjects having an impact on the critical value for rejecting null hypothesis. (Popa, 2008:219)

We performed data processing and analysis using statistical processing program SPSS (Statistical Package for the Social Sciences) version 16.0.

### 3.Results and discussion

In this paper we are discussing four of the thirteen sub-dimensions of the constructed concept of „effective intercultural work team” IWT (see Table 1, below, for a complete list of the variables of the construct „Effective team”). These four concepts are the following: consistency in achieving team’s goals, taking into consideration intercultural differences in IWT, combination of team’s member competencies, skills and abilities, and, the fourth, creativity development based on intercultural competence of team’s members.

We are discussing in detail these sub-dimensions because they are all fully accepted by managers of the researched IWTs.

**Table 1.** Operationalisation of variables construct *Effective team*

Nr.crt.	Item	Code
1	Consistency in achieving team goals	EFICACIT_1
2	Intercultural differences are considered	EFICACIT_2
3	The team learns from experiences	EFICACIT_3
4	Knowing the learning ability of colleagues	EFICACIT_4
5	Combination of skills in team	EFICACIT_5
6	Knowledge of team roles	EFICACIT_6
7	Development of creativity	EFICACIT_7
8	Harmonious working environment	EFICACIT_8
9	Mutual respect	EFICACIT_9
10	Mutual trust and obedience	EFICACIT_10
11	Mutual feedback	EFICACIT_11
12	Conflict resolution	EFICACIT_12
13	Timely communication of information	EFICACIT_13

*Source: own research*

Data from Table 2 (on the following page) shows that the association confirms the first identified association. From the sample of managers, 90% of them attributed this to the IWT they manage. The dimension “Formal education” of an effective team is associated, with perfect intensity (Cramer's V coefficient is equal to 1), first, with high formal education (10 managers all respondents at least 16 years of formal education manager of which 5 have a doctorate in management) and second, with the type of manager who explains (totally or partially) to the team the content of the management method he/she is using.

This attitude can be explained by focusing on the dimension “high uncertainty avoidance”, the role of explanations being to counteract the negative results due to misunderstanding by IWT members about what to do (Sinek, 2009; Potter et al. 2000)

We have identified a leadership attitude characteristic to the concept of "Golden Circle" (The Golden Circle). This concept is about the leader who inspires by: motivation by WHY, discipline by HOW and ensures consistency by WHAT. Good results can be achieved with people who are happy to come to work. People take risks only when they trust the organizational culture, which includes the management method applied, too. These results can fall into a cultural context characterized by low power distance, explained by high percentage of respondents managers (70%) coming from this type of culture. In support of this assertion we have identified that employees appreciate that the manager does not impose its own opinion (even if the percentage is 80% - individualism and masculinity among managers, which would make us believe that they apply a authoritarian management). Employees appreciate that professional development is taken into account which means that organizational culture values the performing employee. This is, in our opinion, explained by the high percentage of masculinity among the countries represented in the sample, masculine cultures are valuating performance. Analysis from the perspective of employees indicates that 73% have responded that there is consistency in achieving team objectives, variable positively associated with the fact that intercultural not affect their behavior (or only partially). Therefore, we appreciate that there is an association with the type of task-related conflict and not with the interpersonal conflict generated by cultural differences.

**Table 2.** Significant associations with variable *Consistency in achieving team goals* (own source)

Variable code	Variable name	Managers			Employees		
		Pear-son Chi-Square Test Significance level bilateral	Cramer's V Significance level	Contingency Coefficient Significance level	Pearson Chi-Square test of significance level bilateral	Cramer's coefficient Significance level	Contingency Coefficient Significance level
Stil_pers_8	Formal education	10,00 ,040	1 ,040	,707 ,040			
Stil_pers_13	Intercultural influences team behavior				9,22 ,010	,529 ,010	,467 ,010
MPERF_4	Method is known management team	10,00 ,007	1 ,007	,707 ,007			
MPERF_12	Take into account the need for professional development				10,18 ,006	,555 ,006	,485 ,006
MPERF_13	This provides the opportunity to improve				13,23 ,001	,633 ,001	535 ,001
MPERF_15	Performance rewards				9,26 ,010	,530 ,010	,468 ,010
MPERF_18	Motivation determines individual pursuit of personal interests				9,12 010	,526 ,010	,465 ,010
MPERF_22	Encouragement to award multiple roles				10,97 ,004	,577 ,004	,499 ,004
INT_MCONF_1	Types of conflict				11,77 ,008	,597 ,008	,513 ,008
INT_ComI_3	Free expression of emotions				4,97 ,026	,388 ,026	,362 ,026
INT_ComI_5	Agreement on non private time				4,65 031	,375 ,031	,351 ,031
Stilp_Jud	Disposition to not judge				5,22 ,022	,398 ,022	,369 ,022
Stilm_Op	Impose personal opinion				6,89 ,013	,433 ,013	,397 ,013
STILP_Intemot2	Productive use of emotions				12,70 ,001	,620 ,001	,527 ,001

Source: our own research

They associated taking into consideration cultural differences with their ability to use emotions to promote intellectual growth, as a dimension of emotional intelligence, as a main feature of a transformational leader (there is a very high intensity of the association, Cramer's V coefficient being equal to 1). The associated cultural dimension to it is "Individualism-collectivism". Therefore, controlling tightly expression of emotions transforming them into a productive issue will be a difficult task for IWT manager.

Rewards are given based on individual performance (normal for individualism). 52.6% believe that individual motivation determines not necessarily follow personal interests, agreeing with it (individualism) and also, they agree with encouragement to award multiple roles (feminine culture). This variable is also associated with the fact that expression of emotions is not an impediment to communication (collectivist cultures, high uncertainty avoidance). Not respecting private time is not considered a problem (collectivist cultures).

Productive use of emotions as part of emotional intelligence and the ability not to judge (individual component of intercultural competence) are not found extensively in the respondents (11,1% of the respondents answered that they have the ability to not judge the other).

We have identified a typology of manager with an individualistic culture type, with low power distance, manager that uses management by objectives. From the perspective of other IWT members coming from other cultures (collectivism 61% and high power distance 64%), the manager must take into account the most valued element identified, such as various aspects of team communication, emotional expression side within IWT.

Only 40% of managers attributed the dimension *Intercultural differences are considered* (see Table 3) to the team they lead.

**Table 3.** Significant associations with *Intercultural differences are considered* (own source)

Variable code	Variable name	Managers			Employees		
		Pear-son Chi- Square Test	Cramer's V coefficient	Contingency Coefficient	Pearson Chi-Square test of	Cramer's V coefficient	Contingency Coefficient
MPERF_15	Performance rewards				10,37 ,006	,560 ,006	,489 ,006
MPERF_16	Compliance group decisions				8,20 ,017	,498 ,017	,446 ,017
MPERF_17	Encouragement for collaborative solutions				6,02 ,049	,427 ,049	,393 ,049
MPERF_20	Team roles				9,67 ,046	,514 ,046	,476 ,046
STILECH	Team interaction style	6,67 ,010	,816 ,010	,632 ,010	15,72 ,001	,691 ,001	,568 ,001
INT_MCONF_1	Types of conflict	6,67 ,036	,816 ,036	,632 ,036			
Stilm_Co	Cooperative				5,31 ,021	,401 ,021	,372 ,021
Stilm_Op	Impose personal opinion				5,31 ,021	,401 ,021	,372 ,021
INT_RU8	Identical reward if successful members				7,65 ,006	,481 ,006	,434 ,006
INT_RU9	Sanctions in case of failure of members	6,67 ,010	,816 ,010	,632 ,010	5,88 ,015	,422 ,015	,389 ,015
STILP_Intemot2	Productive use of emotions	10,00 ,002	1 ,002	,707 ,002			

Source: own research

Managers have associated constructive interaction style in IWT to considering intercultural differences in characterized by a balanced approach between personal and team results, cooperation, creativity, free exchange of information and respect for others' opinions. This style allows satisfaction of individual achievement and team affiliation needs of IWT members. These are precisely the characteristics that theoretically define an IWT. We consider it to indicate that in such a situation the IWT is in the mature stage, closely to the ideal type of team.

Penalties in case of failure and rewards in case of success apply equally team members (collectivism), aspects that are reflected in strong associations with existing types of team conflict, both interpersonal and Task solving related conflicts. This is indicated by the fact that 61% are belonging to collectivistic cultures. The fact that 39% of the sample are people belonging to individualistic cultures, who are associating the above system of team reward and punishment to the fact that "cultural differences are not taken into account".

In terms of employees, the variable related to intercultural differences being considered (36% of them have responded that their team has this feature) is positively associated with first, granting rewards based on performance (individualism), second, encouraging collaborative solutions (low power distance), third, the manager does not impose his/her personal opinion (individualism), fourth, there is agreement for identical reward if successful.

64% of respondents associated compliance to group decisions with disregarding the intercultural differences (individualism), as well as 80% of employees responded that within their team exist more relationship-oriented roles (collectivist approach). In IWT where there is no taking into consideration of cultural differences, the manager is considered not to be cooperative and the team interaction style is passive.

We have identified in this model several relations between team effectiveness and team interaction style, in terms of managerial style, team roles, rewards and punishment system as part of human resource intercultural management.

The small percentage of respondents (40% of managers and 36% IWT members) who allocate this dimension to their team effectiveness indicates that cultural aspects are little taken into account, despite the fact that the team analyzed met the characteristic of an IWT. One possible explanation relates to the fact that these teams members were potentially acculturated from their home country culture, due to adopting the company's organizational culture in which he/she was working for more than two years. Another explanation is given by the conviction of IWT managers and members that the 'hard' part of the activities of team is enough to ensure effectiveness of the team, that is achieving its planned goals.

**Table 4.** Significant associations with dimension *Development of creativity* (own source)

Variable code	Variable name	Managers			Employees		
		Pearson Chi-Square Test	Cramer's V coefficient	Contingency Coefficient	Pearson Chi-Square test	Cramer's V coefficient	Contingency Coefficient
Stil_pers_13	Team intercultural influence behavior	6,67,036	,816,036	,632,036			
MPERF_17	Encouragement for collaborative solutions				7.87,020	,488,020	,439,020
INT_Coml_1	Knowledge language				7,53,006	,478,006	,431,006
Stilp_Ascultare	Willing to listen				4,90,027	,385,027	,359,027
STILP_Intemot3	Intentional generation of emotions				4,95,026	,387,026	,361,026

Source: own research

According to data from Table 4, 50% of the respondent managers consider that the team they manage does not allow development of creativity, while considering that inter-cultural dimension of the team is influencing their behavior. The high coefficient Cramer's V (0.816), indicates a high degree of association between the two variables. The variable related to development of creativity (only 55% of employees answered that their team allows them to be creative) is positively associated with first, encouraging cooperation to find common solutions, second, with perfect knowledge of the language of communication in the team, and, third, with their predisposition to listening, as attributes of intercultural competence. We have also found a positive association between the ability to generate emotions intended to help solve problems and the fact that IWT that enables and develops creativity. However, it should be mentioned again that this should be moderated with the various cultural attitudes about showing or not openly your emotions.

## 5. Conclusions and recommendations

We consider that "Consistency in achieving goals" in an IWT is provided by the type of manager with high formal education, which explains to his/her team the content management method applied without imposing its own opinion. It is a context that takes into account the professional development and provides the opportunity to improve skills of the team members. Rewards are given based on individual performance; there is an agreement to encourage the allocation of multiple roles in IWT. Manifestation of emotions is not an impediment to communication within the team and failing to respect private time is not considered to be a problem. Managerial ability consists of finding satisfactory solutions related to communicating at work between people from cultures with low power distance, and emotionally neutral,

where emotions are controlled during communication, and people from affective cultures and individualistic, with desire for respect of private time. From the perspective of conflict, the challenge will be to manage the resolution of task related conflicts in such type of IWT.

The findings related to "Intercultural differences are considered" indicate that this goal is achieved when managers possess a high level of emotional intelligence so they have the ability to use emotions in order to promote intellectual growth. The manager does not impose his/her personal opinion and is encouraging collaborative solutions (low power distance). Another requirement for success is the existence of a constructive interaction style within IWT based on concern for a balance between personal and team results, cooperation, creativity, free exchange of information and respect for others' perspective. The constructive style leads to satisfaction of needs for personal achievement and affiliation to the team. Manager's ability will be tested in the application of the incentive system, giving reward and punishment, which should combine rewarding team performance according to the individual (individualism-collectivism) and take account of whether punishment is equally individualistically appreciated. A challenge for the team manager will be a preference for not conforming to group decisions (individualism) and relationship-oriented roles (collectivism preferred) that will generate task-related conflicts or relationship related conflicts in such teams.

Conclusions related to "Development of creativity" are that managers who are encouraging cooperation between team members to find common solutions, coupled with perfect knowledge of the language of communication in the team, with team members willing to listen the other team members, could expect better development of team creativity. Our findings indicate that managers have to develop their intercultural competence.

The analysis of data has confirmed that there are relations of interdependence, association between variables for "entry" items into the "system" named "Intercultural Team Work". This system is made of the following constructs: Contextual factors, Performant Management and Intercultural Management) and the characteristics of a performant IWT (i.e. effective and efficient team constructs Team). Our results consist in identifying a possible management "scenario", based on a given intercultural the intercultural aspect of a team determines, ultimately, a certain level of a result variable one of the characteristics attributed to effective and efficient EIA. A high or low level of this "indicator" IWT performance can be explained by the fact that it takes or not into account cultural differences between IWT members.

Due to the recognized limitations of our research: the small size of the sample and research model artificial construction, we cannot generalize the results. On another hand, we consider that results obtained confirmed that it is useful to undertake a broader research study.

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# STUDY ON PACKAGING WASTE PREVENTION IN ROMANIA

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**Abstract** *This paper presents on the one hand, the packaging waste management in our country, and on the other hand the packaging waste – most of them disposable - prevention mechanisms. The study provides useful information regarding the quantities of the packaging waste, the capitalization methods and their impact on the environment and population.*

*Preventing waste means reducing the amount of waste generated, reducing the hazardous content of that waste and reducing its impact on the environment. The importance of waste prevention is nowadays fully recognized and generally considered as a priority within EU, as well as national and regional authorities' waste management strategies and plans, but many efforts still need to be made. In practice, local and regional authorities will have to prepare their own waste prevention plans. They will have to take into account that the waste hierarchy established by the Waste Framework Directive puts waste prevention as the top priority. Waste prevention plans shall in particular include a series of actions aimed at reducing the amount of waste to be managed and treated by public authorities.*

*The current national environmental policy is based on the concept known as "waste hierarchy". In an ideal situation, this means that the waste quantities should be prevented and the waste which cannot be prevented should be reused, recycled and recovered as much as possible, avoiding landfilling.*

*The uncontrolled landfilling is the most disadvantageous option for environment meaning resource losses with negative impact on the environment. The goal is to move forward to a society of recycling and recovery, meaning to climb the hierarchical scale, moving from landfill to recycling and recovery.*

*It is very important to mention that individuals and businesses can often save a significant amount of money through waste prevention: waste that never gets created doesn't have management costs (handling, transporting, treating and disposing of waste). The rule is simple: the best waste is that which is not produced.*

**Keywords:** *waste prevention, packaging waste, recycling, selective collection, environmental protection*

**JEL classification:** Q53

## 1. Introduction

Waste generation is a particularly important issue because, on the one hand, it affects the environment and the human health and on the other hand, it is a reflection of the inefficient use of natural resources by the society. At the beginning of XXI century, we believe that not us, but generally people do not have the required education to treat waste problem as something serious that can influence decisively our future existence.

Technical creativity in waste recovery did not have the same place as the creativity in developing new products and adopting and implementing the technologies for achieving them. We believe that, viewed as an actual and future businesses, waste recovery will find its required technical capacity.

The packaged goods are part of our world and in many ways the packages make our life easier. Unfortunately, the volume of the packaging waste has increased dramatically in recent years.

For the generated waste, it is essential to start the selective collection of the packaging waste among the population, which must be informed, and having its awareness raised through environmental education. Selective waste collection benefits include the selection of valuable fractions (paper/cardboard packaging, glass packaging, plastic packaging, metals packaging, textile packaging), avoid storing easily biodegradable waste in landfills, and increasing calorific value of waste remains.

## **2. The hierarchy of the waste management**

In the current waste management strategies, the trend is an integrated system based on prevention of waste, minimizing waste quantity, recycling and reusing of waste, treatment with a large number of technology, and ultimately, waste remains disposal, also taking care of population and environment health.

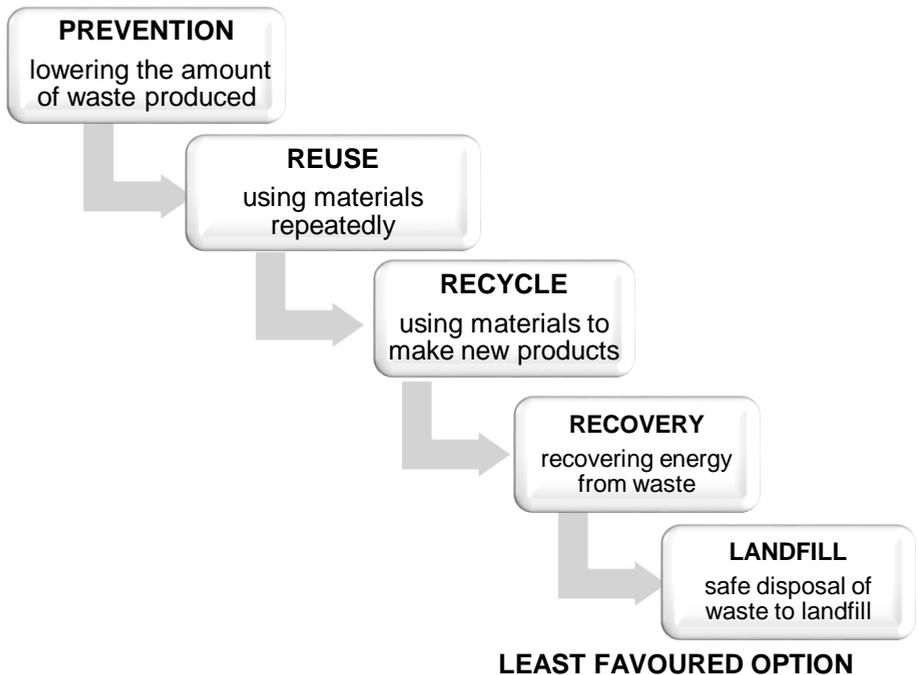
The sustainability of integrated waste management refers to an appropriate management system that fits best for society, economy and environment and that everyone, regardless of the degree of development of the country, is entitled to an appropriate sanitation service.

The European Directive lays down the five-step hierarchy of waste management options, with waste prevention as the preferred option, and then in descending order, reuse, recycling, recovery (including energy recovery) and safe disposal.

Packaging waste prevention is closely linked with improving manufacturing methods and influencing consumers to demand greener products and less packaging. Waste prevention includes measures to reduce the adverse impacts of the generated waste on the environment and human health. Waste prevention can be achieved by reducing the quantity of material used in the creation of products and increasing the efficiency with which products, once created, are used.

Preventing waste by limiting unnecessary consumption and by designing and consuming products that generate less waste are forms of strict avoidance of waste. Packaging waste prevention also encompasses actions that can be undertaken once a product reaches its end-of-life: rather than discarding the product, the final user should consider re-use or repair as options. Extending a product's lifetime or considering option like re-use is form of prevention. Re-use keeps products in the consumption sphere for a longer period and thus avoids the creation of waste. Re-use implies that a product is used again for the same purpose for which it was originally conceived.

## MOST FAVOURED OPTION

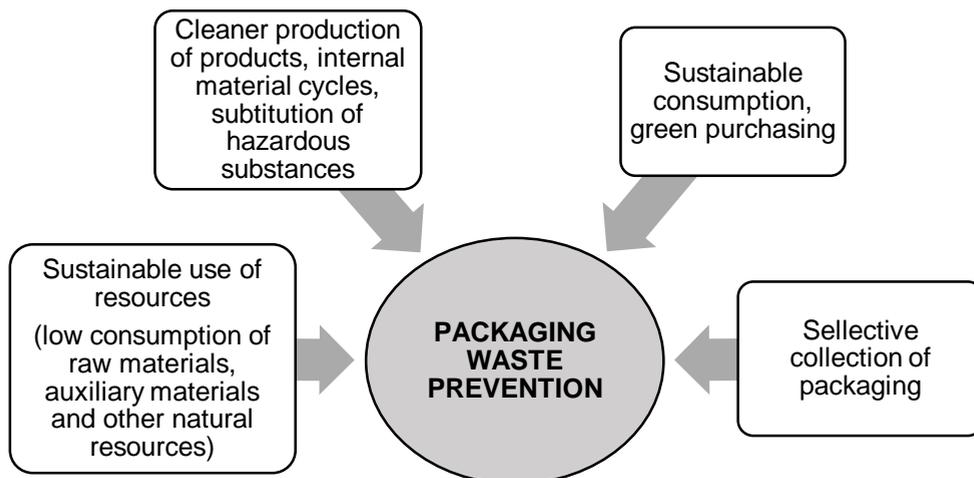


**Figure 1:** The hierarchy of the waste management

Source: [http://www.preventandsave.ie/Introduction\\_to\\_Packaging\\_Prevention.html%20](http://www.preventandsave.ie/Introduction_to_Packaging_Prevention.html%20) (Adapted)

Reducing the hazardous content of waste, rather than impacting the total volume of waste, is considered as qualitative waste prevention and contributes to reducing human and environmental exposure to hazardous materials.

A waste prevention scheme has its origin in the waste management sector, its scope, however, comprises the whole economy, all material flows and products used by a nation, from their respective cradles to their discarding. Thus, a comprehensive waste prevention scheme should not only concern the waste management sector but also the mining sector and productive industries, designers and service providers, the public and private consumers. Consequently, all economic sectors may be stakeholders in the waste prevention scheme and its preparation.



**Figure 2:** The main scope of the waste prevention

Source: EEA (2007): Chapter 6: Sustainable Consumption and Production and Waste Management

It is very difficult to measure the waste prevention, but certain statistics can be reliable in charting progress on defined objectives. The following statistics are helpful in assessing the current status of waste prevention:

- a. Quantities of collected packaging waste per person
- b. Quantities of hazardous waste generated by each person
- c. Public awareness of and declared actions for waste prevention
- d. Use of waste preventing services e.g. repair and reuse centers, home composting
- e. Consumption of ecolabelled products etc.

Eco labels, in particular the EU Flower, help consumers identify products that fulfil environmental criteria including material efficiency and limits on packaging and hazardous materials, thus providing waste prevention information directly to consumers at the time of purchase.

In addition to waste cycle data, information on national demographics, socio-economic characteristics, available infrastructure, reuse systems, trade and manufacturing activities should be collected.

Producer responsibility arrangements are in place throughout Europe, introducing measures relating to the prevention, reduction and elimination of pollution caused by waste and the management of packaging and packaging waste.

### **3. The importance of packaging for maintaining the product quality**

Packaging refers to all materials whose purpose is the containment, protection, shipping or presentation of goods, from their natural condition to saleable form, as handled by the producer or the consumer. Packaging is often divided into three broad categories: primary packaging, secondary packaging and tertiary packaging.

Primary packaging is the packaging which contains the product and is sometimes called sales packaging. Well-designed primary packaging protects the product from

damage and deterioration, it also provides essential information about the product including storage and storage date information and nutritional values. Primary packaging allows manufacturers and retailers to identify their products through brand marketing.

Secondary packaging is the term for the packaging used to contain a number of items of the same product during storage and handling. Cardboards are the most well-known items of secondary packaging but special trays and shrink-wrap plastic are also commonly used.

Tertiary packaging is used between product manufacturers, warehouses and sometimes the storage facilities at large stores. It consists of pallets, shrink-wrap plastic, large cardboard boxes and re-useable packing materials. It rarely becomes household waste and much of it is already recycled or reused.

Packaging waste is generated at all levels of the supply chain, but principally by consumers as the end user. Packaging waste policies may address tertiary packaging use with distinct measures as it is involved in a specific phase of the lifecycle and may implicate different stakeholders.

The packaging meet many functions, on their way from the supplier, to the distributor and finally, to the consumer, as follows:

- a. The packages preserve and protect the products;
- b. The packages facilitate handling, storage and transport of products;
- c. The packages promote the products and inform the consumer.

“In developing countries, the absence of the packaging or an inadequate packaging causes between 30 and 50 percent of the foodstuffs to decay before they even reach the consumers. In industrialized countries, product loss is only about two or three percent”, points out Professor Dr. Dr. Günter Grundke from the German Packaging Institute. Packages therefore protects and conserves the products. The first function refers to maintaining of the packaged product in the initial parameters. The product must be protected from the environmental influence. In this context, there are physical factors, chemical factors and biological factors.

The physical factors include the mechanical shocks, sand, dust, light, temperature, pressure and so on. The mechanical shocks influence both the product and package. They can compress or settle the product inside the package canceling the protection of the package. The light causes discoloration and degradation of goods (vitamins losses). The light-sensitive products must be packaged in opaque packages. The temperature is one of the factor that affects the quality of the product. A temperature over 40°C could determine deformation of products or change the taste and smell. The chemical factors include the water, water vapor, oxygen, carbon dioxide, etc. The packaging should be a barrier to the action of these factors in order to avoid losses of flavors, dehydration of products, loss of gas introduced into the package etc.

The biological factors refer to the microorganisms, insects, rodents. All these can affect the quality of the packages and the products. The package must ensure a very high degree of hygiene.

According to the second function, the packaging should have a shape, a volume and some accessories to facilitate proper grip and handling. In case of the storage, the package must be easily stacked and be resistant to the storage conditions (temperature, humidity, pressure).

Packaging must protect the product during transportation. If either the packaging or the product is damaged, this could lead to the whole pallet of goods having to be discarded as waste. The environmental impacts of overestimated packaging result only from the packaging itself. In the case of underestimated packaging, however, the environmental impact is significantly greater because the product also becomes waste.

According to the third function, the packaging is an important marketing tool. It makes products recognizable for the consumer. And it provides consumers with important product information (mostly required by law) on ingredients, additives, “best before” dates, producers, instructions for use, quality labels or recycling information. With the introduction of stricter requirements in respect of consumer protection and food safety, for instance, producers are increasingly being obliged to provide the necessary information and to ensure that their packaging has sufficient space to display it.

Packaging is an integral part of the product being offered to consumers. Packaging design must attract consumers in an increasingly competitive and quickly changing market while fulfilling the essential functions required for the extended supply chain.

#### 4. Analysis data and interpretation

The main materials used for manufacturing of the packages include the following categories: cellulosic materials (paper and cardboard), glass, plastic materials, metallic, materials, textile materials, wood materials, other (complex materials).

**Table 1:** The amount of generated packaging waste in Romania (tones)

<b>PACKAGING WASTE</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
<b>Paper/Cardboard</b>	386,855	352,100	271,560	265,982
<b>Plastics packaging</b>	375,308	332,600	293,800	281,145
<b>Wooden packaging</b>	213,172	215,500	188,350	211,875
<b>Metallic packaging</b>	75,891	75,700	126,760	55,214
<b>Glass packaging</b>	232,618	193,000	179,730	160,334
<b>Other</b>	3,176	1,800	1,870	390
<b>TOTAL</b>	1,287,019	1,170,700	998,690	974,940

Source: EUROSTAT (2013)

During 2007 – 2010, a quantitative increase of the plastic packaging and paper/cardboard is noticed compared to the other materials, which shows the direction in the consumer behavior.

Currently, Romania registers the increasing tendency of the generated waste quantities (similar in most European countries).

A considerable effort is needed to stop this growth and then to guide this dynamic trend towards a reduction in the generated quantities.

Therefore the main objectives of Romania are the following:

- Stopping the increasing of the generated waste quantities by 2015;
- Subtracting the quantities of generated waste with a minimum 5% / year (previous year) since 2016.

Waste generation is the indicator which best illustrates the interaction between human activities and the environment. Waste generation usually follows the

consumption and production trends. For example, waste generation (quantity/inhabitant) increases together with the income level. The increase in economic production, but also the inefficient management of resources, lead to the generation of huge quantities of waste.

**Table 2:** The amount of recycled packaging waste in Romania (tones)

<b>PACKAGING WASTE</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
<b>Paper/Cardboard</b>	236,917	217,000	186,540	177,636
<b>Plastics packaging</b>	57,312	51,500	69,810	79,391
<b>Wooden packaging</b>	18,315	17,800	24,780	38,451
<b>Metallic packaging</b>	41,800	38,600	71,440	36,267
<b>Glass packaging</b>	38,579	66,900	86,550	91,031
<b>Other</b>	361	500	800	0
<b>TOTAL</b>	393,286	392,300	404,200	422,776

Source: EUROSTAT (2013)

Romania has a statutory producer responsibility regime for packaging. This places a legal obligation on businesses which make or use packaging (raw materials manufacturers, converters, packer/fillers and sellers) to ensure that a proportion of the packaging they place on the market is recovered and recycled.

**Table 3:** Total generated and recycled packaging waste in 2010 (Romania)

<b>Packaging Waste</b>	<b>Total generated packaging waste (tones)</b>	<b>Total recycled packaging waste (tones)</b>	<b>EU target</b>	<b>Recycling rate</b>
<b>Paper/Cardboard</b>	265,982	177,636	60%	66.78%
<b>Plastics packaging</b>	281,145	79,391	22,5%	28,23%
<b>Wooden packaging</b>	211,875	38,451	15%	18,14%
<b>Metallic packaging</b>	55,214	36,267	50%	65,68%
<b>Glass packaging</b>	160,334	91,031	60%	56,77%
<b>Other</b>	390	0	0	0

Source: Own processing using previously data

According to these data, Romania has fulfilled the recycling and recovery targets provided by the legislation in 2010, excepting the recycling rate for the glass packaging. This rate was under the value imposed by the EU.

Eco-Rom Ambalaje is the first organization in Romania which invests in the selective collection of packaging waste from the population in order to reduce the amount of the generated waste. Eco-Rom Ambalaje does not aim at making a profit from the package recycling activity, as its tariffs reflect the system operating tariffs. The operating profit is communicated in a transparent manner to all affiliated companies, and is fully reinvested in environmental protection: acquisition of selective collection infrastructure (containers) and development of educational programs (school handbook, campaigns etc.). Eco-Rom Ambalaje is the organization which holds the right to use the "Green Dot" mark on the Romanian territory. The presence of the

Green Dot mark on a packaging certifies that a financial contribution was paid for that type of package to a national packaging recovery organization, in accordance with the principles set out by European Directive 2004/12/ EC on packages and packaging waste. The Green Dot mark is a symbol of responsible companies, which have made a financial commitment that the packages of the products put on the national market should be collected selectively from the population, recycled and valorized in accordance with the objectives established by law.

Eco-Rom Ambalaje has fulfilled the recycling and recovery targets provided by the legislation in 2011.

**Table 4:** The recycling and recovery targets provided by the legislation in 2011

<b>Packaging waste</b>	<b>Packaging released on internal market (tones)</b>	<b>Packaging waste recycled (tones)</b>	<b>Targets 2011 (legal)</b>	<b>Targets met by Eco-Rom Ambalaje</b>
<b>Glass</b>	89,093	64,221	54%	72.08%
<b>Plastics</b>	196,757	93,653	22.5%	47.60%
<b>Paper/Cardboard</b>	174,956	136,226	60%	77.86%
<b>Metal</b>	33,466	24,309	50%	72.64%
<b>Wood</b>	118,905	36,586	15%	30.77%

Source: Annual Report Eco-Rom Ambalaje - 2011

For 2012, packaging recycling objectives for manufacturers was even higher than the previous year, reaching the maximum growth level, according to national and European legislation, as follows: the total recycling target grows from 50% to 55%; for targets per type of materials, increases are reported for PET packaging – from 42% to 55%, for glass – from 54% to 60% and for aluminum – from 17% to 21%. In 2011, achieving the recycling and recovery targets was possible due to the financial effort made by Eco-Rom Ambalaje, which last year invested about 8 million euros in packaging waste selective collection, about 17% more than the previous year. About 83% of this amount accounts for investment in services of collection, transport and selection of packaging waste from management companies – collectors and sanitation operators.

Selective waste collection is a solution easily available to everybody, and consists of the disposal of waste in specially arranged places, with a view to being recycled. Public institutions, associations, foundations and individuals have the obligation to collect selectively the packaging waste, in properly containers that are located in special places readily accessible to the population.

## **5. Conclusion**

Analyzing the registered date, the capitalization degree of packaging waste is quite low at national level. Primarily, the low capitalization is due to the technical reasons (the absence of the infrastructure for the separate collection and sorting in many areas of the country, and the absence of the recycling capacity for certain materials types). Secondly, the low capitalization is due to the economic reasons (the absence of the financial instruments to stimulate / to oblige the sanitation operators to deliver the collected waste for processing/capitalization and not for final disposal).

Waste prevention includes avoidance of waste generation, qualitative and quantitative reduction at source, and reuse of products. It doesn't include materials recycling and separate waste collection. Waste prevention is a global priority to avoid the uncontrolled accumulation of the packaging waste. The conception phase holds the widest possibilities for prevention. The waste quantities can be reduced at every step of a product's lifecycle. The packaging shall be designed so that performing its functions with minimal environmental impact.

The use or optimization of reusable distribution materials can lead to notable waste reduction and financial savings. For example, the plastic materials are much more durable than the wood materials. Increasing the longevity, reducing the volume and eliminating the single use packaging we can provide waste prevention opportunities in very large quantities.

At consumer level, informational strategies motivating consumers to buy products with minimized packaging content are appropriate, as well as efforts to normalize the purchase of bulk products.

The local authorities play an important role in stimulating public awareness and interest in packaging decreasing or avoidance and can support national efforts by demonstrating the demand for lower levels of packaging to manufacturers. Local authorities also play an essential role in informing local residents about reuse activities: how packaging are collected, where they can be deposited, how to contribute materials in good condition, and where to purchase reused products.

In conclusion, the packaging and the product must be seen as a single unit. The environmental impact of this single unit must be reduced by investigating and initiating waste prevention measures during development. A reduction of the environmental impact and economic efficiency often go hand in hand. Reducing packaging weight and using recycled materials conserves raw materials and reduces costs.

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Ministerul Mediului și Schimbărilor Climatice, *Planul Național privind Gestionarea Deșeurilor*

# GLOBAL TRENDS IN ENTREPRENEURSHIP USING 4 R'S MODEL

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**Abstract:** *The study is based on 250 persons engaging in the manufacturing trading and services sectors in Small and Medium Industries. A discussion on survey about the business profile and leader entrepreneur is also providing. The study investigates the common reasons that motivate Romanian and Albanian women to become and work as entrepreneurs along with the constraints they face when starting and developing their business activity. In this context, theoretical arguments and empirical findings are investigated in order to draw a picture of the factors that motivate women to start their own business, as well as factors that limit the growth and development of women entrepreneurship. This paper examines the factors who can influence person needs to become entrepreneurs. Motivation factors are classified into economic, work, individual, entrepreneurial and social core. Description analyses revealed some important aspects and motivation factors for production activities.*

**Keywords:** *quality management, change management, entrepreneurship, growth Small and Medium Enterprises, leader, production management.*

**JEL:** *M50, M54, O15, O19*

## 1. Introduction

Therefore, this paper aims to provide reasons on why some persons choose to become entrepreneurs by examining the motivational factors which differ among business market.

In this context, theoretical arguments and empirical findings are investigated in order to draw a picture of the factors that motivate women to start their own business, as well as factors that limit the growth and development of women entrepreneurship in transitional countries.

The 4R model provides a conceptual framework consisting of four comprehensive macro categories of leadership attitudes and behaviours and dynamics interaction of these categories.

The model provides a conceptual home for the critical variables in the transformational leadership process.

These variables are organized in four categories: relationship, reputation, research and recognition.

Similarly, the 4R's model details and organizes a vast amount of information of transformational management from theory to practice and presents it in a clear and accessible manner.

The model only approximates how transformational management works in economic organizational life.

Specifically, the 4R picture is:

1- **research** access to key information about markets, customers and competitors to improve marketing focus message;

2- **relationship** one to one or one to many relationships with individual customers that generate sale opportunities, the virtuous leader is depicted in specific organization context

3-**reputation** interest in company by target market based on company's and market understanding of it's capabilities and expertise;

4-**recognition** awareness of company and its value proposition by market position, results the attitudes and actions of the virtuous leader are depicted as linked to outcomes over time.

Each R category is discussed in light of the contemporary economical situation on Romanian and Albanian market.

The benefits of the 4R are explored and present the real situation on economical market and management production like a problem or a false fake?

## **2. Study case**

This research was designed to identify the motivational differences between production or services and trends in entrepreneurship.

The study investigates the reasons that motivate women to become and work as entrepreneurs along with the constraints they face when starting and developing their business activity.

In this context, theoretical arguments and empirical findings are investigated in order to draw a picture of the factors that motivate persons to start their own business, as well as factors that limit the growth and development of entrepreneurship in transitional countries like Albania and Romania.

This paper highlights the situation facing women entrepreneurs and describes the various forms, establish and develop their own business.

### **2.1. Methodology**

The sample was draw for people involved in business activity in Baia Mare and Durres city. A total of 500 respondents were contacted. Respondents were surveyed using a forth part structured questionnaire.

**Part 1-**measured demographic variables using single items such as age, educational background, type of business activity, type of organization.

**Part 2-** measured the factors which were classified into entrepreneurial core, work core, individual and social core relevant for leadership style of the respondent person.

**Part 3-** measure the profile of leadership, the attitude in different situation of the manager, and identify the type of leader.

**Part 4-** measure the perception for new development and new orientation into organization, identify some individual suggestions.

The internal consistency of the measure and the results indicate that the items in measuring the leadership dimensions are reliable.

Also the survey makes radiography upon the economic activity and gives an answer to the organization problems.

## 2.2. Results

Taking in consideration Harrison, R, (2008) article we used comparable data from two European countries.

Out of 250 respondents for each city, majority of them are aged educated that's the motive of involvement in his own business (26% baccalaureate and 57% academic studies).

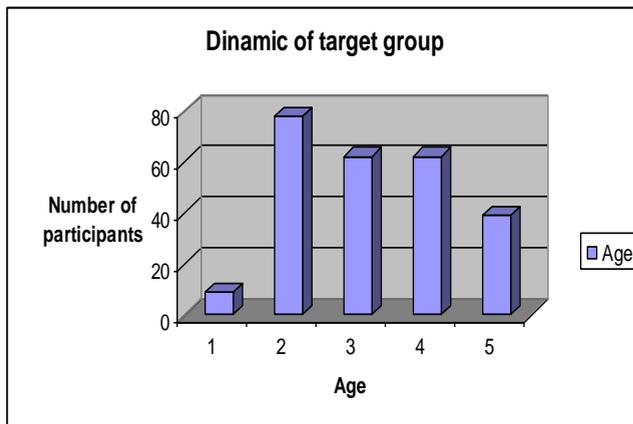
Women entrepreneurs were found to be more matured in terms of age and more educated, here fore, the educated generation is more interested in becoming entrepreneurs.

The importance of education for successful entrepreneurship has been well established.

A comparison of educational qualifications over a period of time (pre and post 2000) indicates a progressive trend of more MBAs, post graduates, professionals and individuals with work experience becoming entrepreneurs.

The respondents are also found to be very well equipped with work experience, to desire to have own preferred working style and change in working style may explain why they have decided to become entrepreneurs.

The demographic profile of entrepreneur show that women are basically below the age of forty, between 20-40 age old, (34%) Figure 1.



**Figure 1.** Evolution of age entrepreneur

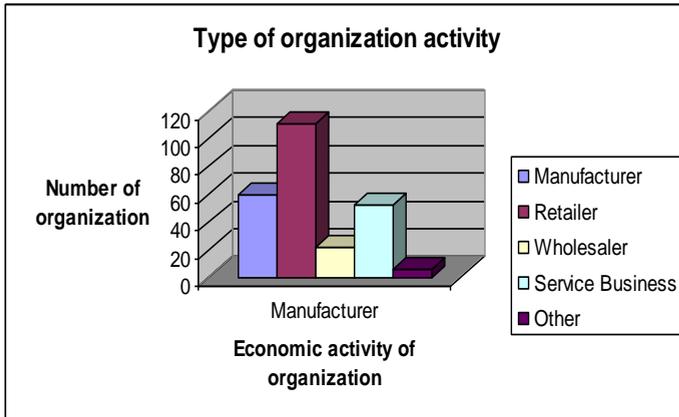
Archibugi (2001), Bogliacino and Pianta (2009, 2010) identify Pavitt's taxonomy groups (1984) that describe the level of technological opportunities in industry and the influence of innovation and new technology for future development and harmonization with market customers needs.

The ups and downs of aggregate demand have been shown to affect changes in production and demand for labor.

Taking in consideration the survey results, a classification can be easy done, the economical activities can be structure in the category of supplier dominated industries, here we include traditional sectors food, textiles, clothing, hand makes products, training and other activities.

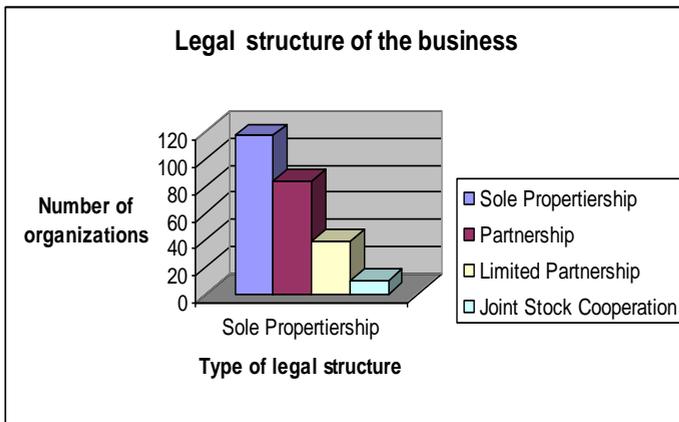
Evangelista and Savona (2003) present the importance of the relation between innovation and skills in services and the direct relation between the necessity of structural change and economic dynamics.

It is not surprising that the number of women entrepreneur gas increased and growing interests in privatisation, self employment and business oriented employment, all this facilitated by the growth in various sectors such as general commerce, personal and public services, training and consultancy and other (Figure 2).



**Figure 2.** Type of business activity

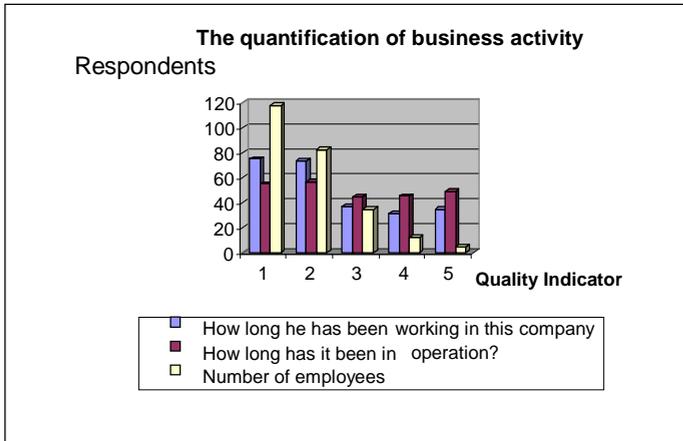
This is to ensure that entrepreneurs are not left out the process of national and economic development, particularly in important sectors of Small and Medium Enterprises (Figure 3).



**Figure 3.** Legal structure of the business

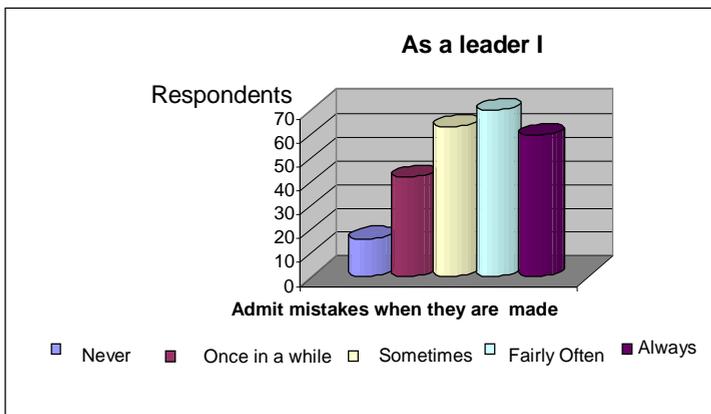
The diversity in the patterns of employment in the manufacturing sector is documented in this paper also where the dynamics of employment depends of economic cycle Boca G.D.(2011)

It is clear that government has been involved and concerned about unemployed person including women entrepreneur development in the last period. Desire for greater life flexibility, seeking challenges, fulfilling a long-felt desire or escaping from organizational glass ceiling is also among the motivation factors that women to start-up their own businesses (Figure 4).



**Figure 4.** Analyze of business characteristics

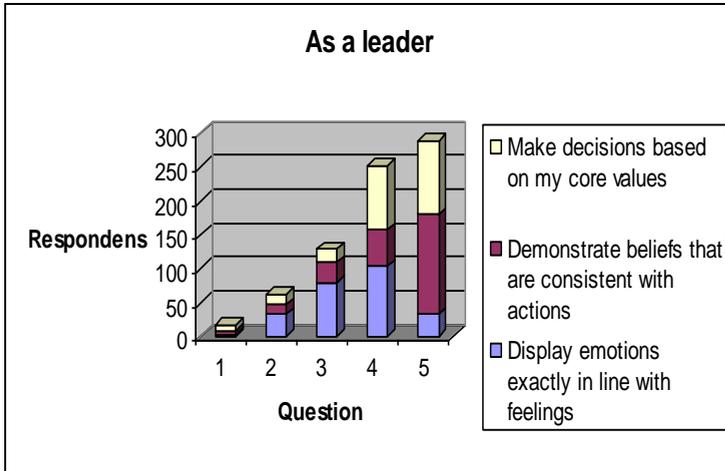
From the dates obtain we identify that major activity are non productive as a matter of fact the production it is not developed yet in our regions, we are under the discovering faze of the miracle products which can be produced (Figure 5).



**Figure 5.** Profile of leader

As the factors proposed are generic in leadership profile, they are also applicable to women entrepreneur and a practical change management in their own business. Leadership before, during and after change implementation is the golden key to getting success.

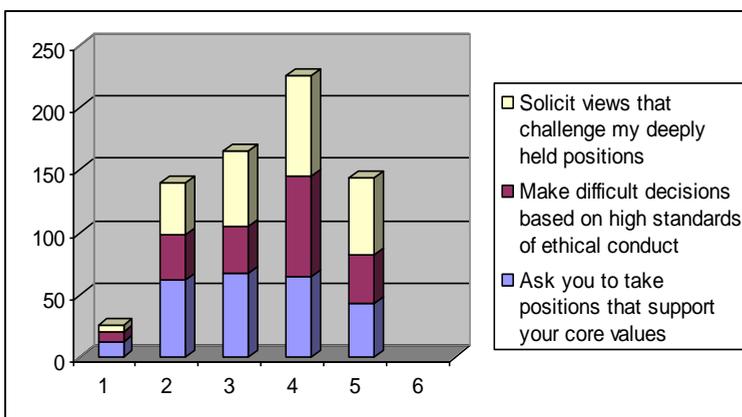
The Matrix factors for leadership profile examines the personal background, stage of career, early life experiences and growth environment, indirect benefits, opportunities in the carrier prospect and the impact of market conditions. From research work perspective various attempts were undertaken to identify factors that support the growth of women entrepreneurs as leadership and comprehensive list of factors are identified and put in evidence the object of this study (Figure 6).



**Figure 6.** Opinion of leadership

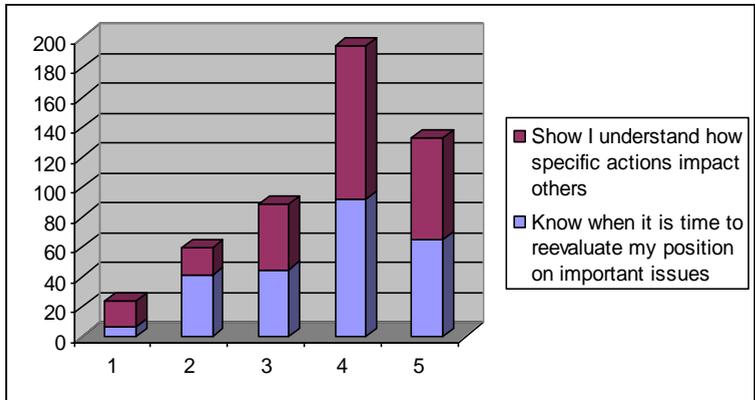
In this study comparing the motivational factors among males and females it was found that disagreements with the bosses, with the drive to control own destiny, were motivating factors for male entrepreneurs.

The women are involved in service activity because of their good communication and their spirit of creation always takes in consideration the benefits of the entire organization (Figure 7).



**Figure 7.** Leader style

Hence women were driven to entrepreneurship because the independence and sense of achievement which entrepreneurship offers. Management refers to the ways of the personnel in charge of directing the organization, which in this instance is an entrepreneurship (Figure.8).

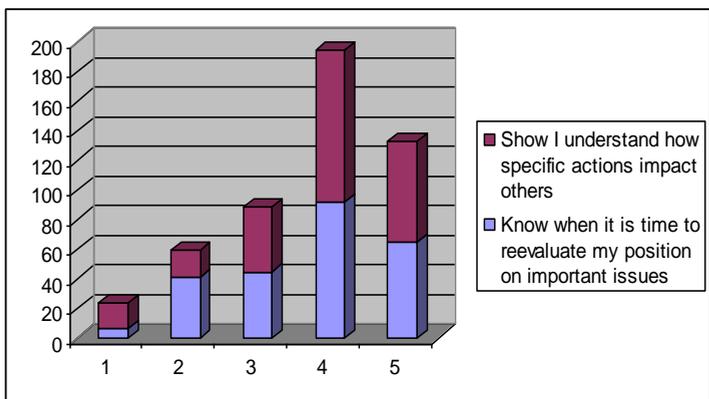


**Figure 8.** The flexibility of leader

Taking in consideration Barbuta-Misu, N.(2012) results regarding the possibility of modeling the Influence of Financial Variables on Enterprise, we should established also for entrepreneurs a model, to maintain an environment within the business to encourage efficiency among employees.

Part 4 of survey measure the perception for new development and new orientation into organization, identify some individual suggestions under the model of Pianta, M.,(2005).

Figure 9 plots the change of the manager mentality groups as the first evidence of the diversity in the relationship between innovation and employment during the economic cycle and their organization new orientation on market.



**Figure 9.** The flexibility of leader to innovation

An in depth understanding on the influence of these variables will be useful to understand the complex phenomenon of entrepreneurship.

Being in the management connotes power and influence for the person, it is not unusual for an entrepreneur to do all the management functions at the start of the business.

Poor leadership means an absence of hope, which, if allowed to go on for too long, results in an organization becoming completely nonfunctioning.

The organization must deal with the practical impact of unpleasant change, but more importantly, must labor under the weight of employees who have given up, have no faith in the system or in the ability of leaders to turn the organization around.

### 3. Conclusion

Based on the survey, we concluded that not in every organization management the manager leader, understand the managerial competency in the some connotation.

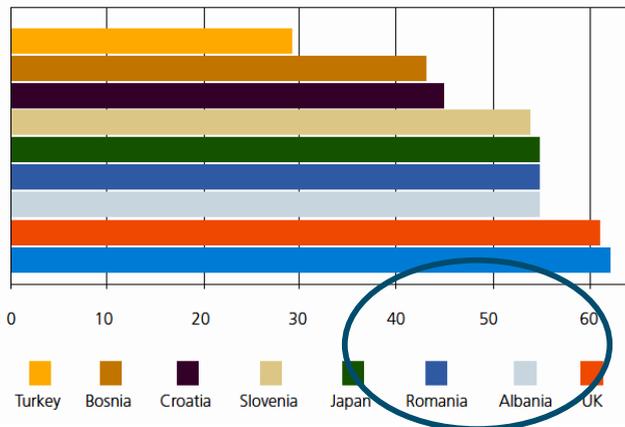
The system of independence of competencies with performance management, which has an impact on other areas of employee work like is not used in all companies in the survey.

Using competencies and skills assessment remains only on the formal level in most companies.

Since 48% entrepreneurs are focus on retailer activity and services, and only 24% it is involved in productivity activity, a new orientation it is necessary to encourage the economical growth of the city.

The individual and entrepreneurial core appears to be very important, it is important also to encourage the spirit of production as long we are in economical crises who need new alternatives and also new products.

The women voice was analyze in a global environment, so we can identify the labor women force and the impact on each country from this point of view ( Figure 10.).



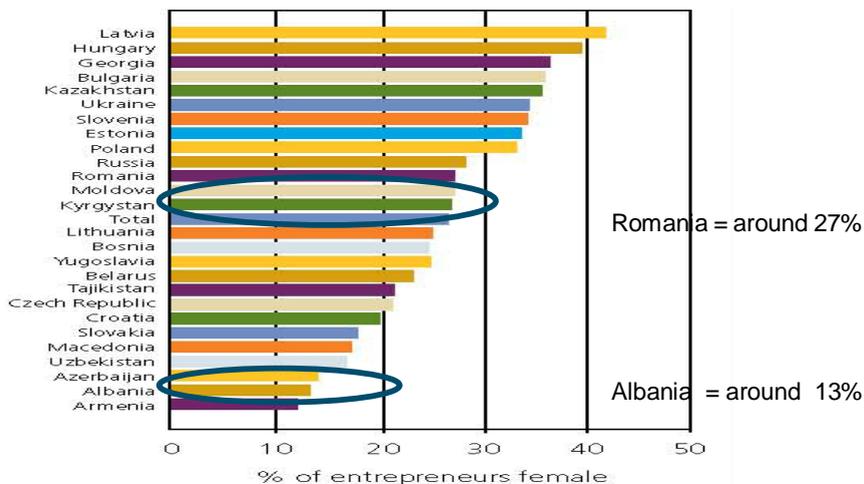
**Figure. 10.** Women Labor Force participation in Romania and Albania  
Source: IFC, Voices of Women Entrepreneurs in Bosnia and Herzegovina

## Main Obstacles for Entrepreneurs

- Licenses, taxation, cost of finance and labor issues are cited as the biggest obstacles to women owned businesses,
- Little coordination among each other,
- Unclear or varied business requirements of the different regions,
- Absence of strong women's business organizations,
- Much-needed training and networking,
- Female entrepreneurship has been recognized as an important source of economic growth.

## Global Trends in Female Entrepreneurship

Using the data base obtains by Sabarwal and Terrell (2008) (Figure 11.) we can observe some global trends between Romanians and Albanians Entrepreneurs.



**Figure 11.** Share of Female Entrepreneurship by countries

Source: IFC, Voices of Women Entrepreneurs in Bosnia and Herzegovina, Sabarwal and Terrell 2008

In conclusion the global trends in female entrepreneurship identify using the survey are similar with Sevi Simavi, (2009) remarks like:

- Regardless of gender, entrepreneurial activity is significantly higher in Romania = around 27% and in Albania = around 13%
- The level of female entrepreneurship in market typically is oriented especially in commerce- retailer.
- A systematic gender gap a business ownership,
- A big segment from adult population are working abroad in each country.
- Employment matters to entrepreneurial activity. Those women who are employed in a wage job are more likely to be involved in entrepreneurial activity than those who are not working, are retired, or are students.
- Training and involved adult population in projects, courses and specialization in learning how to provide their own business.

The future research will be focused on efficiency of methods used for competency development in companies and realised a diagnose in comparison with other countries.

#### **4. Acknowledgements**

This work has been realized as a research work between our universities to diagnose the regional potential of market from both countries and to identify the entrepreneurship pulse in a city where economic crises put his signature on industry and people life.

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# MANAGEMENT CONTROL SYSTEMS: A REVIEW OF THEIR COMPONENTS AND THEIR UNDERLYING INDEPENDENCE

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**Abstract:** *Apart from governance and risk management, internal control is a third major component of corporate governance. Proper corporate governance relies upon risk management in order to identify the problems faced by the organization and on internal control in order to achieve its objectives. Internal auditors, apart from supporting the organization and enabling it to identify and monitor the risks lying ahead, must also understand and monitor the functioning of the internal control system which is the key to implementing the corporate governance principles. Internal control is a process implemented by the management of the public organization and directed at providing reasonable assurance in terms of meeting the organizational goals, which are grouped in the following categories: operating effectiveness and efficiency; reliability of financial reporting; compliance with the laws and regulations.*

*The design of the control system is highly significant when the system is used, and the part it plays in the management of the business entity is fundamental. For instance, budget control is a measure of performance. A supervisor can use this variation with difficulty or with ease. Used differently, the same measuring system may convey different benefits.*

*The organization of the internal control system in a manner that is divergent with the principles of planned economy has led managers to believe that control activities are discretionary, and the subsequent lack of management responsibility has weakened the efficiency of internal control systems during the first years after 1989.*

**Keywords:** *internal management control, governance, risks.*

**JEL classification:** G28

## 1. Introduction

Professional literature in the field of internal corporate governance control often emphasizes some of the following aspects:

- Horngren and Foster's definition underlines the importance of adequate information: "a management control system is a means of gathering information that would assist and help coordinate the process of making and monitoring the decisions within the organization". (Horngren, C.T., G. Foster, 1991)

- Merchant describes control as “keeping things afloat” and “encouraging people to act as the organization would want them to”. He describes how behaviour is influenced by various control alternatives, such as focusing on results, actions or personnel and whether controls are the most appropriate.

- In his work, Decentralisation: managerial ambiguity by design, Vancil (1978) addresses some of the key control issues, such as: how to better structure an organization in order to manage the two “conflicting elements”, i.e. the need for efficiency (promoted by centralization) and the need for adjustment (promoted by decentralization). (Vancil, R. F., 1978)

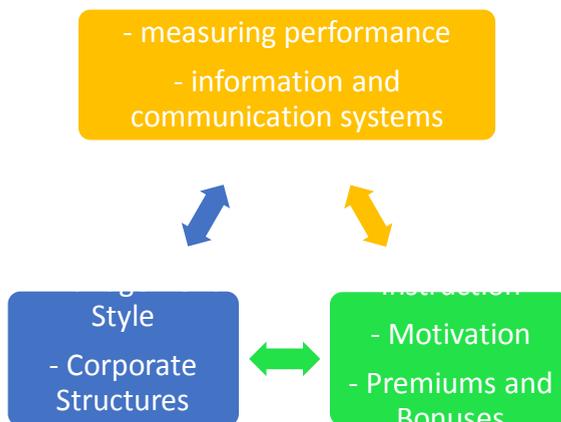
The design of a management control system that “ensures that the organization is doing what the management wishes”, is quite a difficult endeavour. In the opinion of certain professionals, an efficient system is made up of a number of interrelated elements, such as:

- performance measurement,
- motivation and
- organizational structure

These different approaches would suggest that certain manners of describing control systems are correct, while others are not or are less important. However, we believe that this perspective is less useful than the one that integrates various outlooks.

## 2. The correlation among the elements of the internal management control system

While each component of the diagram can be subject to analyses and conclusions, the key to understanding the control system is to comprehend the interdependence of its components. Interdependence affects all of these. None of them can be properly controlled without considering the impact on the other elements and the way they too need to be supported.



**Figure 1:** The components of the management control system

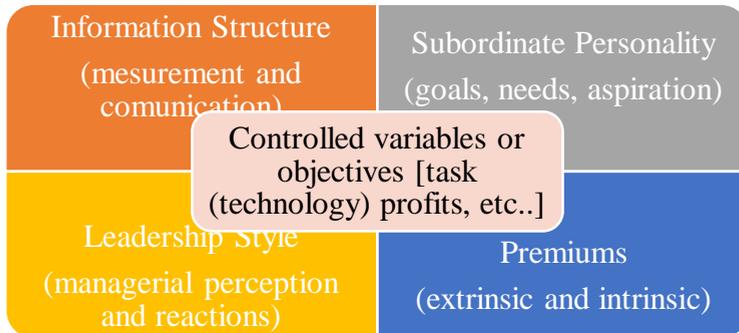
The relationship between performance assessment methods and direction has been analyzed from various angles. Euske (1984) mentions some of these approaches in his work *Management control: planning, control, measuring and evaluation*. (Euske, K.J. 1984). Euske presents a bi-dimensional framework to describe the characteristics of control in any specific organization. The horizontal axis displays three ways of classifying control sources into organizational, informal or individual groups. The classification can also be found in Dalton and Hopwood (1971), Dalton and Hopwood (1974), (Dalton, C.W., A. Hopwood, 1974). The vertical axis displays three types of controls: steering controls, yes-no controls and post-action controls (Newman, 1975; Amey, 1979). Euske's framework, shown in Table 1, uses nine cells and each of these contains a description of the control process that would correspond to the targeted source and to the type of control. Each cell reflects a definition of performance, whether or not the budget is met, and compliance with the group's code of conduct or the achievement of personal goals. Steering controls influence behaviour before it happens. Yes-no and post-action controls use the results of the last behaviour in order to influence future conduct. Knowing whether the control system is post-action, yes-no or steering or whether it is managed individually, socially or on an organizational level is not enough, as shown in Table 1. In order to understand the influence of a particular control system within an organization, one must identify the unique combination of the control characteristics and the statistical contingencies.

**Table 1:** Control possibilities within the organisation

	<b>Administrative or organizational</b>	<b>Informal social groups</b>	<b>Individual</b>
<i>Feed-forward or preliminary controls</i>	Using forecasts in order to identify budget fluctuations	Advising the new employees on the group's code of conduct	Setting personal short-term performance goals based on the position targeted 10 years ago
<i>Screening models</i>	Quarterly revision of the budget if a project must be continued	Not being invited to socialize with the group after work	Asking to be promoted after successfully negotiating an important contract
<i>Feedback or post-action controls</i>	A bonus offered to a manager for not exceeding the budget of the previous year	Joking about a colleague having lunch with the boss too often	Leaving the organization after not being promoted

By developing this matrix, Euske focuses on understanding the correlation between the characteristics of management control and situational contingencies. (Emmanuel et al., 1990) have made the following statements in their work, *Accounting for management control*: It is increasingly recognized that economic concepts represent only one part of the foundation upon which management

accounting rests. The internal functioning of the organization, the way in which people react to information and the design of the control systems to affect human behaviour are also fundamental to the operation of a complete accounting system. Ansari's integrated model (Ansari Consulting Group) includes four major components that focus on the objectives of the organisation (Figure 2). However, Ansari emphasizes the leadership style and places personality on a second place in terms of importance in designing an efficient management control system.



**Figure 2:** Components of the control system

If we analyze the components outlined in the model shown above, we can trace the correlations occurring among the different structures of the control system, while the necessary measure to be taken is to minimize the procedural differences between managers and subordinates.

### **3. The manner of conducting internal management control within organizations**

If the higher levels of management have manifested a risk-averse attitude in the organization and if certain other lower management levels or positions are risk-seekers, this may lead to confusion and even conflict within the organization. Certainly, the opposite scenario is equally alarming (Griffiths, 2005).

Risk-averse culture has the following characteristics:

- management tends to confine itself to what it knows for certain;
- stability, experience and knowledge are fundamental values and also the most sought after attributes;
- the organisation is very reactive, it tends to wait for something bad to happen and act afterwards;
- the hierarchical structure of the organisation has numerous levels and most decisions are made at the top levels;
- the management wastes a lot of time trying to determine how to develop activities in a more efficient manner, instead of focusing on the consumers' needs for services;
- strategies do not change very often within the organization and when they do, it is a rather momentous occasion;
- mistakes/errors are personalized, thus causing the employees' lack of initiative, as this is a typical "shame culture".

On the other hand, there is also a risk-seeking behaviour, called the “*can do*” culture, that is mostly characterized by:

- innovation and motivation are the most sought-after values;
- interest is manifested for capitalizing opportunities and engaging the employees;
- major decisions falls within the duties of the general management, while the entire organisation assumes the task of making routine decisions;
- the main orientation of the organisation is towards the external environment, focusing on the provision of services to customers;
- strategies and policies change frequently in order to emphasize the changing circumstances;
- mistakes are accepted – and even encouraged – but hiding the mistake is unacceptable.

Risk theorists argue that it is very important to understand *the culture or the sub-cultures of the organisation you work for*. If you are part of a risk seeking culture but one where there is a lot of opposition, this image will have to be compared with the findings of the internal audit.

At the same time, it is equally important to identify risk preference in organisations that are otherwise risk averse, as risk seekers can act like “*loose cannon*”, making the organisation vulnerable to unexpected threats.

In either of the two cases, the approach of the internal audit and their recommendations will have to provide a clear picture of such occurrences.

There are numerous benefits associated with the integration of the management control system in the corporate culture, among which:

- greater attention given to the issues that actually matter;
- reduced time spent by management in the settling of disputes;
- less surprises;
- more satisfied customers;
- safeguarded reputation;
- increased interest in doing the right things in the right way;
- increased probability of reaching the objectives set for the company;
- less complaints;
- increased probability of change initiatives and capitalization of the projected benefits;
- assuming risk and more informed decision-making;
- support for innovation;
- lower insurance costs.

According to the IIA (Institute of Internal Auditors), the main responsibilities of internal audit in terms of the implementation of the internal management control system are:

- provides assurance in terms of risk management processes;
- ensures that the risks are properly assessed;
- evaluates risk management processes;
- evaluates the reporting of significant risks;
- revises the management of significant risks;

**Table 2:** Statement on the relevancy of the internal audit activities performed in the organization

	YES	NO
Are there any internal audit procedures?	75 %	25%
Is there an audit plan based on risk assessment?	50%	50%
Is the information collected and processed?	66.7	33.3%
Is audit evidence collected?	50%	50%
Is the audit report prepared?	100%	-
Are recommendation considered for implementation?	100%	-

On the other hand, inadequate corporate governance impairs the efficient allocation of capital in the economy, hinders investment in administration and lowers the confidence of capital holders. James D. Wolfensohn, the former president of the World Bank once said: *corporate governance is more important for the world economy than the government of countries* (Cannon, D.M., Godwin, J.H., Goldberg, St. R., 2008).

**Table 3:** Correlation between the benefits and the disadvantages of implementing internal audit

Nr	Statements	Rating					
		1	2	3	4	5	6
<b>A</b>	<b>Internal audit conveys the following advantages/benefits to the organisation</b>						
1	It helps the business meet its objectives	5.3	8.8	17.5	43.9	10.5	14
2	It organizes and ensures the efficient functioning of the internal control system	5.4	3.6	19.6	41.1	16.1	14.3
3	It enables the proper running of external audit	3.8	1.9	15.1	39.6	17	22.6
4	It improves the efficiency and effectiveness of risk management	5.5	5.5	18.2	32.7	20	18.2
5	It helps diminish the costs of external audit	10	10	2	38	16	24
6	It issues recommendations that add value by improving the audited activity	5.6	5.6	18.5	31,5	22.2	16.7
7	Follow-up of the results after the management has implemented the recommendations of internal audit	5.8	3.8	7.7	40.4	25	17.3
8	Development of the quality assurance techniques	5.5	1.8	20	40	12.7	20

9	Constant bettering of professional competencies and experiences	7.1	3.6	10.7	39.3	23.2	16.1
<b>B. Internal audit generated the following disadvantages for the public organisation</b>							
1	High costs related to the internal audit function itself	10.7	21.4	21.4	12.5	10.7	23.2
2	Likelihood that IA may generate management tensions and discontent in the organisation	12.2	25.5	14.5	20	7,3	20
3	Likelihood that IA may generate employee tensions and discontent in the organisation	13	20.4	18.5	16.7	11,1	20.4
4	IA does not perform its risk prevention and control function	17.3	19.2	9.6	11.5	15,4	26.9
5	Failure to identify in due time any evidence of fraud or error in the organization	17	20.8	17	5.7	15,1	24.5

(1 = not at all; 2 =to a small extent; 3 = to an average extent; 4 =to a large extent; 5 = completely; 6 = don't know / don't want to answer)

Internal auditors provide assurance in terms of the feasibility and relevance of informing an organisation and its internal control. In a rapidly changing environment, with global competition, new types of organisational structures and up-to-date information technology, the measures the government takes in relation to present business organisations and the recent past are relatively less important, while the information and the steps to be taken in the near or distant future are much more decisive.

**Table 4:** Relevancy of the missions accomplished by the internal audit service

Nr	Statements	Rating					
		1	2	3	4	5	6
1	Audit of the human resources function	3.6	7.1	14.3	33.9	19.6	21.4
2	Audit of the legal function	7.8	7.8	17.6	25.5	17.6	23.5
3	Audit of IT systems	6	14	16	20	24	20
4	Audit of financial and accounting activities	3.6	5.4	5.4	25	41.1	19.6
5	Audit of the purchasing process	3.8	5.7	11.3	22.6	37.7	18.9

A closer look at the above table will reveal that the subjects answering the survey believe that the main priorities are the auditing of the financial and accounting activities (41,1%), the auditing of public procurement (37,7%), the auditing of the human resources of the organization (33,95%) and the audit plan of the public authority should not overlook the audit of the legal function and of the IT systems (with 25,5% and 24%, respectively).

Basically, the focus has shifted from the internal audit function to the threats undermining the strategies.

The objectives set by the organisation for the internal management control system guarantee that:

- risk management is a key part in the strategic management of the business;
- there is a positive approach to assuming risk;
- risks are considered when any decision is made;
- opportunities are capitalized by actively managing the risks and threats that may postpone success.

In order to meet these objectives, the organization will adopt the following approach:

- definite responsibilities, roles and reporting rules for risk management will be delineated and observed in all functions and departments;
- a program for training and learning opportunities will be introduced in order to supply managers with the acquisition and development of the skills and competencies needed for risk management;
- risk assessments will be incorporated and treated as part of decision-making, planning and revision of company operations;
- the measures taken for managing individual risks will take into account the potential occurrence and impact of these risks on the successful completion of the set objectives;
- an updated record that will be accessible to all who need it will identify all the strategic and operational risks, will supply estimates/identification/assessment and recording of the current measures directed at managing these risks;
- risk management activities will be measured in relation to the company goals and objectives;
- all the levels of the organization, partners and majority shareholders will try to understand risk and its management, alongside risk treatment options within the organization.

#### **4. Conclusions and suggestions**

The design of an internal management system is a spontaneous procedure; it resembles the design of a car, which leaves the user no clue as to how the car can be driven. It can be driven aggressively or carefully. It can receive constant care, or it can be automatically controlled and benefit from temporary maintenance. The whole picture entails both the design and the instructions manual on how the car actually runs.

An actual scale of the process encompasses a cycle that runs from planning, operation, revision and back to planning. The main requirements for setting up and implementing internal control (GO no.119/1999) in an organization are as follows:

*general requirements:*

- to ensure the completion of the general objectives by systematically assessing the risks related to structures, programs, projects or operations and keeping these risks within acceptable levels;
- to guarantee the considerate attitude of the managing and administrative staff, as they are required to promptly respond to the requests of the management and to effectively support internal control;
- to guarantee the integrity and the competency of the management and administrative staff, as well as ensure that they know and understand the importance and the role of internal control;

- to set the specific objectives of internal control and ensure that they are adequate, comprehensive, reasonable and aligned with the mission of the organization and with its overall objectives;
- managing staff should constantly monitor all the activities and should comply with the obligation to take corrective, prompt and responsible measures whenever the law or the regulations are breached during certain procedures or when certain activities are performed in an immoderate, ineffective, and inefficient manner;

*specific requirements:*

- to keep written records on the organization of internal control, on all the operations of the entity and on all significant events, as well as to record and file the documents appropriately, so that they can be promptly accessed for analysis by authorized parties;
- to record immediately and accurately all the significant operations and events;
- to ensure that the approval and performance of the procedures is exclusively in the hands of specifically authorized parties;
- to separate the responsibilities related to operations between parties, so that the approval, control and recording should be adequately assigned to different individuals;
- to ensure competent management on all levels;
- documents and resources should only be accessed by authorized parties that also bear the responsibility of properly using and keeping these resources.

Basically, indirect reference is made to the generally accepted models of organizing internal control, i.e. the COSO and CoCo control frameworks, to the internal audit standards and to the international best practice principles.

COSO defines internal control as a process conducted by the Board of Directors, by the management and by the entire staff of the organisation, directed at providing reasonable assurance on the completion of the objectives of the organisation, in terms of:

- the effectiveness and the efficiency of the operations;
- the accuracy of the financial statements;
- compliance with the current legal standards and regulations;

The control framework developed by CoCo is relevant for the boards of directors, for the general and the first line management, suppliers and auditors as well. This framework had a much broader theoretical approach than the familiar COSO framework and employs the term of “control” rather than internal control.

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# COMMUNICATION STRATEGY ABOUT BUSINESS MODELS: STAKEHOLDERS PERSPECTIVE

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**Abstract:** *Organizations inform stakeholders about their current and future activities, processes, created value, strategic intentions, and other information that may influence the established relationships. Organizations choose to communicate with stakeholders by different means and in varied ways. The annual report represents a way of communicating between companies and their stakeholders, and it is offering comprehensive information about how companies operates and creates value. The business model is an emerging concept in management literature and practice. The concept describes the logic by which a organization creates, maintains and delivers value for its stakeholders. Through annual reports organisations can communicate to stakeholders information about their business models. We investigated how information about business models is explicitly communicated through annual reports, and how this information is referring to stakeholders. Our paper aims to reveal which stakeholders are more often mentioned when organizations are communicating about business models through annual reports. This approach shows the attention degree given by organizations to stakeholders. We perceived this from a strategic point of view, as a strategic signal. Thus, we considered if the stakeholder is mentioned more frequent in the communicated message it has a greater role in communication strategy about business model. We conducted an exploratory research and have realized a content analysis. The analysed data consist in over a thousand annual reports from 96 organizations. We analysed the informations transmitted by organizations through annual reports. The annual reports were for a time period of 12 years. Most of the selected companies are multi-business, and are operating in different industries. The results show the stakeholder's hierarchy based on how often they were mentioned in the communicated messages about business models through annual reports. Based on our results the communication strategy about business model is focused primarily on delivering messages about external stakeholders. The most attention is given to customers, followed by suppliers and partners.*

**Keywords:** business model, stakeholders, business model innovation

**JEL classification:** M19

## **1. Introduction**

The business model term is becoming increasingly used among academics and practitioners. It is an emerging concept in management and strategy literature, with accelerated growth after the year 1995 (Ghaziani and Ventresca, 2005; Zott et al. 2011).

The concept became popular in e-business research, and researchers used it to

explain how the new business, based on the internet created value (Timmers, 1998; Rappa, 2001). Nowadays, the concept is largely used to explain how value is created for every business. The idea that every business organisation has an business model is shared among many researchers (Chesbrough, 2007; Gambardella and McGahan, 2010).

Despite the fact that the business model concept is widespread in management and business vocabulary, there is no widespread shared definition among researchers (Lecocq et al., 2010; Zott et al. 2011), and some times the concept is used without a clear definition (Chesbrough, 2007).

The business model concept is defined in various ways by different authors, but the common idea, shared by many researchers is that the business model helps to explain how organizations creates, delivers and captures value (Amit and Zott, 2001, Johnson et al. 2008; Teece, 2010; Osterwalder and Pigneur, 2010).

According to Casadesus-Masanell and Ricart (2010) the business model concept is used by strategy scholars to describe the logic by which the organizations creates, distributes and captures value for stakeholders.

Every business model consist in more interconnected elements, that, taken together, creates, delivers and captures value. In the business model literature there are several opinions about which are the business model components.

There are some commonalities about business models components proposed by various authors (Rappa, 2001; Brousseau and Penard, 2006; Bonaccorsi et al., 2006; Johnson et al. 2008; Pigneur and Osterwalder, 2010): value proposition, revenue stream or incomes, cost structure, partners, clients, capabilities and processes.

Organisations communicate to stakeholders information about their business models. This information can refer to one or more business model components and it may be addressed to one or many stakeholders. Organizations choose to communicate with stakeholders by different means and in varied ways: presentations, press releases, meetings, annual reports, commercials etc. For example, organizations can express a new value proposition to its customers through a product and/or service presentation or advertise it through different marketing channels.

In our paper we studied how information about business models is explicitly communicated in annual reports. We have chosen the annual report because it offers comprehensive information about companies. The annual reports are primarily intended to give shareholders information about the company's activities and financial performance, but also include relevant informations about and for other stakeholders.

## **2. Methodology**

Our paper investigated how information about business models is explicitly communicated in annual reports, and how this information is referring to stakeholders. We have analysed the messages about business models and which had explicitly mentioned one or more stakeholders. The messages were interpreted as strategic signals and we highlight the assign attention given by organizations to each stakeholders when communicating messages about the business model. From the strategic point of view, as a strategic signal, we considered that if a stakeholder is mentioned more frequent in the communicated messages, than it has a bigger

role in the communication strategy about business model. Thus, our paper aims to reveal which stakeholders are more often mentioned when organizations are communicating about business models through annual reports.

The analysed data consist in 1124 annual reports from 96 organizations. The annual reports are for a time period of 12 years (between 2000 and 2011 inclusive). We chose the top 100 companies from Fortune 500 (of year 2011), and then selected only those for which we have obtained a number of over 8 annual reports. Most of the selected companies are multi-business, and are operating in different industries. We conducted an exploratory research and have realized a content analysis. We considered paragraphs as the context units and sentences as the recording units. First we have selected the annual reports in which the "business model" term was mentioned explicitly, and then, all the paragraphs that contained this term were chosen for analysis.

Then, we identified from those paragraphs the sentences containing explicitly the "business model" term, and also those that had a direct reference to a stakeholder. We have taken into consideration the following stakeholders: banks, clients, suppliers, partners, shareholders, employees and the government. Aiming to identify the references to stakeholders, we searched for the following terms (both singular and plural): "customers", "clients", "users", "shareholders", "banks", "suppliers", "government", "partners", "employees" and "stakeholders".

We calculated the frequency of those sentences that contained both the "business model" term and a direct reference to stakeholders. The frequencies were calculated for each stakeholder.

Also, we calculated the frequencies of all sentences (from paragraphs) in which were explicitly mentioned the stakeholders, regardless of the explicit message about business models. The frequencies were calculated for each stakeholder.

After, we searched to see if the messages from the analysed paragraphs and sentences were correlated.

### **3. Results and Discussions**

Organisations communicate to stakeholders information about their business models through annual reports. From the strategic point of view this information can represent a strategic signal. All stakeholders have a role in the business model, they help creating value and also capture a part of it. We assumed that if a stakeholder is mentioned more often in the explicit messages about business models, then the strategic signal is more powerful, and we had interpreted as a bigger role for that stakeholder in the communication strategy about business model. Thus, we wanted to hierarchize stakeholders based on how often they are mentioned in messages about business models.

We identified the sentences containing explicitly the "business model" term, and in the same time, a direct reference to a stakeholder.

The results (Table 1) highlight the attention given by organizations to each stakeholder when communicating messages about the business model.

**Table 1:** Stakeholders - frequency of occurrence in explicit messages (in phrases) about business models

<b>Stakeholders</b>	<b>Frequencies (intersection of business model term and stakeholders reference – in phrases)</b>	<b>Percent (%)</b>
Client/Customer/User	165	55.37
Supplier	32	10.74
Partener	32	10.74
Shareholders	22	7.38
Government	19	6.38
Bank	16	5.37
Employees	11	3.69
Stakeholders	1	0.34
<b>Total</b>	<b>298</b>	<b>100.00</b>

In our analysis we summed up the frequencies of the following terms: "clients", "customers" and "users". We are aware of the differences between the meaning of the terms, especially for e-businesses in which users are not similar with clients. However, we made only one dimension for clients/customers/users based on value proposition perspective. The value proposition is one of the key components of a business model. It is a bundle of products and/or services and it represents the benefits that a company offers to its customers. A user can be viewed as any entity who uses or consumes a good or service to obtain a benefit or to solve a problem and who may or may not be the purchaser of the item. So, because users benefit thanks to organization's value proposition, we included them among customers. In table 2 we present the frequencies for each term ("client", "customer", "user") that composed the client/customer/user dimension.

Our results show that most often the explicit messages about business models contain a direct reference to customers. Based on our results we consider, from strategic point of view, that customers have an important role in the business model.

**Table 2:** Clients/customers and users - frequency of occurrence in explicit messages (in phrases) about business models

Stakeholders	Frequencies (intersection of business model term and stakeholders reference – in phrases)	Percent (%)	Frequencies (stakeholders reference – all sentences in the paragraphs)	Percent (%)
Client	38	12.75	72	11.04
Customer	116	38.93	219	33.59
User	11	3.69	30	4.60
Total (Client/ Customer/User)	165	55.37	321	49.23

Also, according to Osterwalder and Pigneur (2010:20) “customers comprise the heart of any business model”, and also the business model can be designed around a well defined customer need.

The well known importance of the customers is that they have the ability to influence the firm's ability to generate incomes. From the business model perspective, the customer can be viewed more than just an actor that influence the organisations' revenue stream.

In the business model literature, customer is a frequently considered as one of the key components of business model. Beside that, many other business model components are close related and influenced by this important component.

For example, in great proportion, the value proposition is shaped after customer characteristics and needs. Based on the chosen value proposition, the companies are using various key resources, key processes. Also strategic relationships are shaped to serve the assumed objectives, and so on.

Beside the fact that the customer is viewed as an important component in business models because it is important for designing firm's value proposition, according to Plé et al. (2010), the customer is considered as a resource for the business model. The customers can participate at the innovation or production process of a firm. Based on the authors' research (Plé et al., 2010), the customers can contribute with the following inputs: relational, physical, mental, emotional, financial, temporal, and behavioral.

Our results show that second, after customers, the explicit messages about business models frequently contain a direct reference to supplier and partners. They also have an important role in the firms' business models. These stakeholders are treated in the business model literature as components of the business model.

Both suppliers and partners contribute at the creation and capture value. Companies create partnerships and nurture good relationships with supplier in order to reduce risks, optimize activities, and have access to resources.

Our analysis reveal that the other stakeholders: shareholders, banks, government and employees have relative small and close scores. We consider that the

communication strategy about business models is more focused on external stakeholders: customers, suppliers, partners, government, and banks. And from this external stakeholders, more attention is given on the ones that have a greater role in creating value.

The shareholders are the receivers of the messages. The annual report is primarily addressed to shareholders, and they are informed about relationships with other stakeholders. We believe that this could have a negative effect on frequencies relating to shareholders. Also, the employees are very important internal stakeholders, however, because the communication strategy about business models is more focused on external stakeholders these results are explicable.

The results also show that the explicit messages about business model are focused on each stakeholder, and are referred very rarely in the same time to all stakeholders. This means that organizations have clear messages related to each stakeholder in part.

We analysed the importance given by organizations to stakeholders in those phrases that explicitly contained the business model term and, also, in all phrases from selected paragraphs (the paragraphs that contain the "business model" expression). The purpose was to see if the analysed phrases contain the same strategic signal as selected paragraphs, from the perspective of communicated messages which mention stakeholders. We considered that if we obtained similar percentage frequencies, the messages are correlated, and a unitary signal was transmitted about stakeholders. The result (table 3) show the frequency of all phrases (referring to stakeholders) from the selected paragraphs. The result show that the stakeholders' hierarchy remain much the same from the point of view of strategic signal interpretation.

**Table 3:** Stakeholders - frequency of occurrence in paragraphs about business models

Stakeholders	Frequencies (stakeholders reference – all phrases in the paragraphs)	Percent (%)
Client/Customer/User	321	49.23
Supplier	78	11.96
Partener	76	11.66
Government	50	7.67
Shareholders	46	7.06
Employees	46	7.06
Bank	29	4.45
Stakeholders	6	0.92
Total	652	100.00

We consider that the strategic signals highlighted from both analysed phrases and paragraphs are much the same. Pearson's correlation test indicate a strong positive correlation ( $r = 0.996$ ,  $p = 0.000$ ).

The results (table 4) show that the difference (procentual) between frequencies obtained from the analysed phrases and paragraphs does vary a little, but not significant. The biggest frequency difference appears for customers about six percents. This can be interpreted that the messages are more targeted in phrases on customers than in the rest of the paragraphs. However, the difference does not change the hierarchy, and does not affect the meaning of the strategic signal.

**Table 4:** Stakeholders - frequency variation (procentual)

Stakeholders	Percent (intersection of business model term and stakeholders reference – in sentence)	Percent (stakeholders reference – all sentences in the paragraph)	Difference (Percent)
Client/Customer/User	55.37	49.23	6.14
Supplier	10.74	11.96	-1.22
Partener	10.74	11.66	-0.92
Shareholders	7.38	7.67	-0.29
Government	6.38	7.06	-0.68
Bank	5.37	7.06	-1.69
Employees	3.69	4.45	-0.76
Stakeholders	0.34	0.92	-0.58
Total	100.00	100.00	0.00

#### 4. Conclusions

We investigated how information about business models is explicitly communicated through annual reports, and how this information is referring to stakeholders. The paper reveals which stakeholders are more often mentioned in explicit messages about business models through annual reports. This information was investigated from a strategic point of view, and it was perceived as a strategic signal.

Thus, we assumed that if a stakeholder is mentioned more frequent in the communicated messages, it has a greater role in organization's communication strategy about business model. We do not exclude the importance of any stakeholder and their vital role for organizations. But, we consider that the importance given by organizations through communication is different.

The annual report is primarily addressed to shareholders, and they are informed about other stakeholders, we think that this could have a negative effect on frequencies relating to shareholders, and their role could be more important.

Organizations are using clear messages related to each stakeholder, and are referring very rarely, at the same time, to all stakeholders.

Our results show that the communication strategy about business model is focused primarily on delivering messages about external stakeholders. Utmost attention is given to customers, followed by suppliers and partners.

This paper represents a exploratory and preliminary study in explaining how stakeholders are viewed from the business models perspective. We have analysed

only explicit messages about business models (with reference to stakeholders) communicated through annual reports annual reports. For more insightful findings, other communication materials from other communication channels could be investigated in future research. Our results show the characteristics of a generic communication strategy, because we had analysed all messages express by all organizations, togheter like single unit. More research will be done in the near future to see if this characteristics differ throughout the years or from one industry to another.

## Acknowledgements

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## ETHICAL ASPECTS OF ENVIRONMENTAL MANAGEMENT

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**Abstract:** *The purpose of this article is to outline the main economical and social benefits that can be obtained by adopting an ethical attitude of the organisations which use a performant environmental management. From the idea that the human being is the master of nature, it was passed to the view according to which the human being must ensure a balance between consumption and the use of resources. In order to achieve our goal we identified the factors that lead to long term or even permanent destructive effects over the environment and we briefly present the reasons for which the organizations adopt and implement environmental management systems. Also, the difficulties encountered in implementing environmental strategies have been briefly enumerated and the competitive and economic advantages that can be achieved by adopting an efficient environmental management and the main reasons that grant to the environmental management a special significance were exposed. This theoretical paper emphasizes the importance of the adoption by organizations of a "green behavior" and reveals correlations between sustainability, economic growth and environmental performance in organizations. The analysis of the ethical aspects of environmental management shows the links that can be created between the development of an ethical culture of organizations and the achievement of the environmental excellence. The research provides an overview of the concept of environmental ethics and encloses it within the scope of environmental management. Someone needs to explain why an increasing number of organizations, both large and small, are setting up environmental management systems, making environmental investments and reducing risks over and beyond legal requirements, even when the benefits are not at all obvious, even in the long run. Also, this paper provides some practical examples of organizations environmental problems and points out how these organizations adapted their environmental strategies. The main conclusion of this conceptual paper is that organizations' competitiveness in any industry and environmental protection are two interconnected concepts and we believe that there can be no excellence in business without excellence in environmental protection or vice versa.*

**Keywords:** *environmental management; environmental ethics; business ethics; environmental performance.*

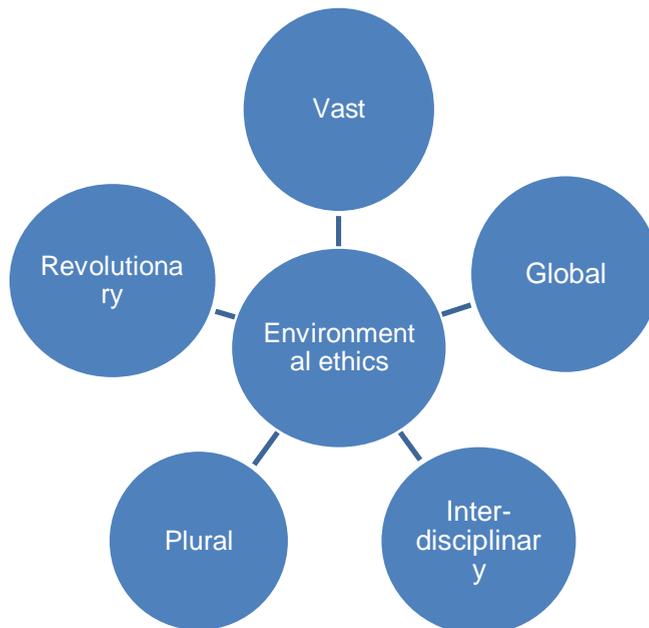
**JEL classification:** *M10, Q56*

### **1. Introduction**

Ethics, in its origins and in actual sense, is considered a branch of philosophy. We define ethics as a systematic study of morality and human behavior that attempts to extract from our moral codes and basic beliefs, concepts that morality is based on. By ethics we mainly refer to morality - imagining how we express our moral judgments, how they are justified if challenged, what weighs significantly in a

conversation, and how we know if we really reached a valid conclusion. One of the studied aspects of ethics is the environmental ethics or the way in which organizations try to face the challenges of the business environment, while demonstrating a high degree of morality and respect towards the environment. Undoubtedly, we can state that environmental ethics is a field that aims to provide a moral justification for the cause of global environmental protection. According to Yang (2006), the main features of environmental ethics (Figure 1) are:

- Environmental ethics is vast – including not only all people everywhere, but also animals and the whole nature.
- Environmental ethics is interdisciplinary - There are many overlapping concerns and areas of consensus among environmental ethics, environmental politics, environmental economics, environmental sciences and environmental literature
- Environmental ethics is plural - Anthropocentrism, animal rights theory, biocentrism and ecocentrism all provide unique and, in some sense, reasonable ethical justifications for environmental protection
- Environmental ethics is global - Ecological crisis is a global issue and environmental pollution does not respect national boundaries
- Environmental ethics is revolutionary – it criticizes the materialism, hedonism and consumerism that accompanies modern capitalism and instead, it calls for a 'green lifestyle' that is in harmony with nature.



**Figure 1 – The features of environmental ethics**

Source: Own projection

Throughout time, environmental ethics and business environment were considered as two opposing areas, sometimes even incompatible. Such a situation has often been translated in terms of environmental policy and management as a major contrast between supporters of economic performance and environmentalists. To strengthen the things mentioned above, we can take the example of a manager who, while facing financial problems, has to choose between saving the company and consolidating its position on the market or implementing environmentally beneficial actions. Choosing to consolidate the financial position of the organization, the same manager will have to argue why more and more companies, regardless of their size, analyse their environmental impact, implementing environmental management systems or adopting decisions to reduce environmental risks even beyond law.

The Industrial Revolution represented a period when environmental protection was not taken too much into account, excelling only the economic interests of organizations that aimed only at economic progress, economic development at any cost and intensive use of all categories of resources. The environment has been transformed into a "stage" of economic competition between the major industrialized nations.

A turning point, both for society and for business field and environmental protection, is the '90s. Environmental issues have become issues of business and play an increasingly more important role in the organizations' activity. One of the measures taken in this respect was the creation of tools to control and try to improve the environmental performance of an organization. An example of such tools of analysis and control is the environmental management systems and environmental audits.

## **2. Environmental Management – A Current Challenge**

Environmental management concept embodies the concept of sustainable development through various mechanisms that combine technological processes, sustainability and economic growth in the production processes of goods and services. We consider that an environmental management system implemented correctly in the management system of any organization contributes decisively at increasing its competitiveness with a significant reduction of environmental impact. Among the benefits that a competitive environmental management can bring to an organization we can mention: reducing the costs, improving the public and social image of the organization, conservation of non-renewable natural assets, attracting new customers, easier penetration in some markets, improving environmental performance improving the relations with central and local public authorities.

Among the main reasons which give great importance to environmental management, we can mention:

- Professional ethics;
- National and international legal rules;
- Economic profitability
- Macroeconomics
- Pragmatism.

Thus, many companies have realized the need to identify new production technologies and to implement actions that will result in improved environmental performance. Economic efficiency has led organizations to implement appropriate environmental management processes to meet economic and production intentions, having a proactive attitude towards improving their processes.

The main reason for which an organization should consider implementing an effective environmental management system is to protect, first, the health of the community to which it belongs and of all people and ecosystems that may be affected, and to increase their contribution to maintaining and improving environmental quality.

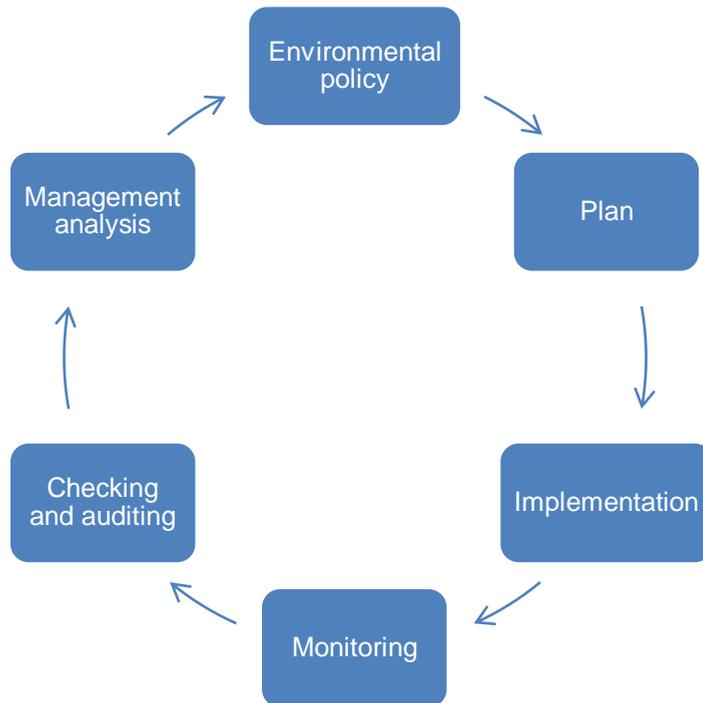
On the other hand, one shouldn't completely neglect economic and competitive advantages that can be achieved by adopting effective environmental management, among which we can mention:

- Improving control over expenditure;
- Improving the image and relations with the external environment;
- Facilitating the obtaining of certain approvals and authorizations;
- Increasing profitability of the organization
- Meeting the requirements of investors and other stakeholders.

At the same time, we can certainly say that the environmental management system is a systematic approach that aims to incorporate environmental goals and priorities in routine operations of an organization. Netherwood (1996) points out that every business is unique when developing their own environmental management systems. This is because each organization has its own management structure, products or services, processes, and financial and political priorities. The adopted systems should continually measure, plan, improve and revise the organization's strategies for achieving both business and environmental excellence.

Ledgerwood et al. (1997) noted that environment audits require a balance between the various actions and values, as opposed to financial audit which involves most of the time, the application of hard and fast action. Environmental audits can be designed to verify compliance with specific environmental regulations, to evaluate the effectiveness of environmental management systems or to assess the analyzed organization's environmental risks. The benefits of using these tools to check and control vary depending on the objectives and scope of environmental audits. Some common benefits of environmental audits can include: awareness of how to fulfill legislative requirements, demonstrating environmental responsibility, confirming compliance with the organization's environmental policy, awareness of how to improve environmental performance.

Just as James and Bennett (1994) noted, an environmental management system is a cyclical process (Figure 2) consisting in a number of methods that should be used in order to achieve an effective assessment of environmental performance. We agree with what Mosley (1996) said suggesting that such a cycle can be seen as a dialogue between the measures established by specialists and functionality required by managers.



**Figure 2 – The stages of an environmental management system**

Source: Own projection

In general, environmental management systems encourage companies to accept responsibility for protecting the environment, ensuring continuous improvement of the way in which they manage environmental requirements. When implementing an environmental management system, each organization must adopt environmental strategies correlated with its environmental performance by integrating all management functions. An efficient management without a proper analysis of environmental policy, can never be achieved. Contemporary organizations should aim to achieve excellence in business, including in their strategies a range of concepts without which such a target is difficult to achieve. In the specialized literature we can distinguish four major concepts:

- sustainability - the society should not use more natural resources than those that the natural environment can regenerate.
- qualitative growth (sustainable) - any organization should aim at sustainable growth according to the inhabitants; this growth can be achieved by a decreasing or constant use of natural resources and a decreasing or constant environmental expense.
- sustainable development - meeting the development needs of the present generation without compromising the ability of future generations to meet their own needs.

- sustainable society - a well-structured society that behaves so that it can exist for an indefinite number of generations.

### **3. Ethical Aspects of Environmental Management**

There are three major significance that the environment can have for humanity: (1) quality of life, (2) intrinsic value and (3) the means of production. An environmental problem occurs when an individual or organization believes that the relationship between him and the environment has suffered some unwanted changes. This happens when one of the three meanings is affected so much that a group of people considers it to be problematic. Consequently, environmental problems are not individual but are social problems.

The problems regarding environmental protection currently hold special significance, not only in terms of the technical aspect, but also morally. The idea that man is the owner of his nature turned into the perspective that man must ensure a balance between consumption and use of resources.

Currently, environmental issues evolve as fast as mankind develops and we get to face increasingly more destructive consequences of this development. Unfortunately, environmental issues are complex, specific and complicated because of their economic, social, cultural, technical size that we need to consider when trying to solve them. This complexity can be reduced only by changing human behavior towards the environment. Thus, it is necessary for humanity to adopt and harmonize ethical dimensions with scientific, economic, social and legislative aspects in order to control the environmental pollution and aiming at achieving an effective protection of the environment.

The environment is affected by a number of factors that generate destructive effects in the long-term or even permanently. Everything starts from the lack of minimum ethical principles and it continues with items that have a negative impact on the environment as directly as possible. Among the factors that most often bring damage to the environment we can mention:

- The lack of research responsibility - the desire to achieve profit regardless of the environment;
- The technology - a growing consumption of energy, having as main consequence the weakening of the environment;
- The religious orientation – it is considered that the only reason of nature's existence is to serve man;
- The lack of environmental education - too few educational institutions give due consideration to showing environmental protection principles among children and adolescents;
- The overdevelopment - its main effect in the long term is an economic downturn;
- The over consumption - the main factor generating destructive effects on the environment;
- The lack of social responsibility of most organizations - which had as main objective the achievement of profit by any means.

Unfortunately, the sense of voluntary responsibility and the desire to become sustainable were not the main motivations for most organizations when they undertook a series of environmental initiatives. The main reason that these actions took place was to comply with legal requirements and regulations. Thus corporate culture, aggregation of expectations, beliefs and values, must perceive greening in

the long term as a key business value, which should become an inherent activity, rather than a conscious problem.

We're pretty close to the end of current consumption habits and current lifestyle. Some problems occur suddenly and unexpectedly, so that the moment science will be caught up is inevitable. For example, we don't know when an ecological crisis might occur, in addition to the economic crisis of the last years or which will be the environmental impact of certain current technological breakthroughs such as the use of nanotechnology, the use of biofuel and the use of alternative energy. Therefore, it is imperative that every individual and every organization builds their own ethical framework to relate with nature through the assessment of the consequences of their own behavior on nature (Paslack, 2012).

Environmental ethics is a discipline in applied ethics which deals with the moral analysis of how companies, shareholders, employees, buyers act on the environment. Environmental ethics has emerged as a new discipline that joins ethical values of the natural world (Van de Veer and Pierce, 1994; Armstrong and Botzler, 1998). Environmental ethics tries to engross some principles and moral values on the environment, in the same way in which ethics, in general, has an impact on business, medicine, engineering or technology. Many organizations face problems incorporating some ecological principles such as sustainable development and environmental protection in their management practices.

One of the main reasons for the difficulties in implementing environmental strategies, is the difficulty to find a balance between economic and social factors. Aiming at effective participation in global environmental protection, environmental ethics specialists began to be actively involved, since the beginning of 1990, in implementing environmental ethics principles in establishing the organizations' policies. G. Winter (1995: 36-56) focuses on three main reasons for the introduction of good environmental practices:

- accepting responsibility for the conservation of natural resources;
- awareness of development opportunities through the establishment of measures to protect the environment and reduce costs, thereby increasing income;
- avoiding or reducing the risks, such as ignoring environmental problems or facing economic sanctions.

Therefore, we wanted to continue with identifying several instances where environmental ethics was both a central and important point in addressing some economic initiatives of organizations. A first example is that of Shell Company, that in 1995 wanted to drill in Brent Spar marine platform in the North Sea, and even if they had all the legal approvals of British government they became victim of Greenpeace campaigners and boycott consumers. As a result, the legal decision to install offshore was finally, not implemented, because the company did not take into account the demanding ethical expectations of the society.

Another example is that of Mc Donald's Company, which around 1970 was heavily criticized for its environmental policies. Since then, McDonald's has started a comprehensive program to reduce the quantities of packing they introduce on the market. Thus, if the average weight of the container for a menu was of 46 grams at the beginning of the 80's, today's average weight packaging is of 25 grams, resulting in a 46% reduction in the amount of packaging used.

According to Stainer and Stainer (1997) British Telecom, in their publication *Putting the Environment on the Agenda* (1996), point out that, in the pursuit of their mission to provide world class telecommunications and information products and services, they exploit technologies which are basically “friendly” to the environment. Furthermore, they aim to minimizing the impact of their operations through a programme of continuous environmental improvement.

#### **4. Conclusions**

In conclusion, we can say that the activities of environmental policy, audit or establishing an organization's strategy must be conducted in an ethical climate that basically aims at creating a corporate culture of high morality. However, both management and employees need guidance on how to deal with ethical issues. Therefore, several European organizations have established and implemented some codes of ethics that should address environmental concerns. They range from the simple phrase, such as Digital Equipment Corporation to the complete and explicit statements such as Shell code of ethics.

Environmental ethics is a field that aims to provide a moral justification of all decisions regarding the the worldwide environment. The fact that environmental ethics is vast, global, plural, revolutionary and interdisciplinary determine us to pay a growing attention to this area that can lead to the implementation of a competitive and sustainable environmental management.

One of the main motivations for companies to implement environmental management strategies is to comply with the law and we can observe that quite many organizations find it difficult to create balance between some economic reasons and the social factors. We believe that the benefits that add value to organizations by adopting an ethical environmental management are: sustainable development for a sustainable society, ensure a etichal balance between consumption and use of resources, cost reduction by creating a „green” image. As shown in the examples presented, mostly, the ethical reasons urged the companies to review certain decisions and strategies, despite the fact that they were in accordance with the laws.

We support the idea according to which organizations' competitiveness in any industry and environmental protection are two interconnected concepts and we believe that there can be no excellence in business without excellence in environmental protection or vice versa. The ethical conduct of each and everyone must evolve from meeting legislative requirements to what is moral.

#### **5. Acknowledgements**

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# THE CONSEQUENCES OF ORGANIZATIONAL CHANGE ON THE HUMAN FACTOR IN THE TEXTILE INDUSTRY

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**Abstract:** *The study of this paper emphasizes the aspects of change in organizations from the textile industry and the consequences of their implementation on human resources. The present paper falls within the non-experimental quantitative research, as well as having an explorative side due to the fact that it explores a reality in order to discover whether there are certain relationships between the chosen variables. The research is transversal because the data collection is achieved by applying a one-time, ad hoc questionnaire that was built specifically for the conduct of a research, partially presented in this paper. The research method or the procedure used is the survey, the technique employed is the one of the questionnaire applied through the process called "self administration" and the investigative tool is the questionnaire on paper.*

*Along with a change in design or implementation plan and organizational culture, human resources contribute significantly to the success of any kind of change. Compared to the current process of globalization in which the economies and the financial markets are closely linked, and given the highly dynamic industrial climate that is characterized by items such as restructuring, relocation and subcontracting, Romanian companies appear to be aware that the social and ethical role of firms attracts increased attention on the living standards of employees. The resources of an organization in solving the arising problems are many, varied, and it depends only on its willingness to discover and capitalize. Difficult moments generated by implementing changes or the onset of seizures are such problems, which can not only have technical, but also human aspects. In managing the latter the human capital owned by the firm is undoubtedly important, but this must be combined with the quality of good management. The literature is replete with conceptual models of effective organization that can improve or streamline the industrial process, but a strategic orientation towards effective personnel policy is not very expensive, it being very necessary to ensuring the sustainability of the firm. For the textile industry to be successful, we need a better communication between industry and the education system and training, so that the needs and the qualification skills be clearly indicated in order to have a properly trained human resource. So, we can say that for the successful implementation of changes in the textile enterprises the material components, the financial and the human ones, should be combined, organized and updated with the aim of improving human resources management by specializing and training the personnel.*

**Keywords:** Textile, human resources, organizational change, organizational culture.

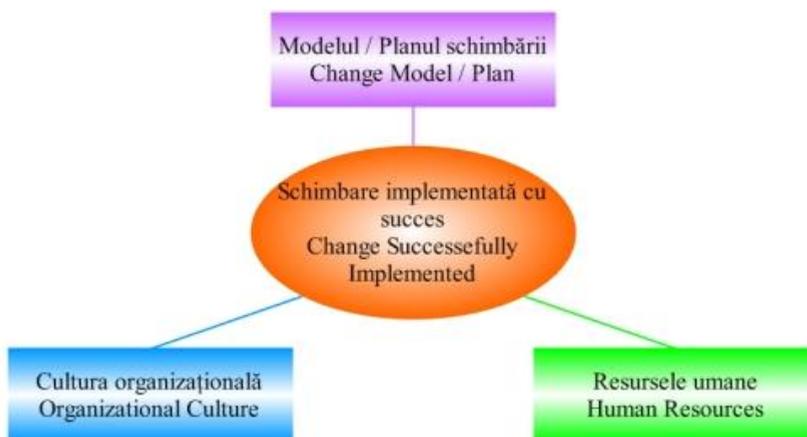
**JEL classification:** J24

## 1. Introduction

If the "structure" is the skeleton of the organization and the "process" is the nervous system or its infrastructure then the "employees" are the blood and the internal organs. Without understanding and mobilizing the energy of teams and individuals, no change, no matter how brilliantly conceived, will be viable. Understanding the employees, both as an inertia factor and as a lever for change, is a full understanding of what the company has and what are its needs in terms of complex skills, if the attitudes and leadership styles are suitable for the future trying to be created. (Kenney,1988).

To achieve a change strategy resources are required. These human resources can not be created overnight, because every "step" - training, restructuring through layoffs, retraining, recruitment, takes time. Changing culture raises the same issues. As for the success of a change in the company, the "corporate culture" is a double-edged sword. It is the mark of an organization that makes it unique, reflecting the history, ideas, values and behaviors of the organization. Without a good understanding of the traditions that underlie a particular organization changes that contradict them can be easily targeted and therefore will be rejected.

For the Romanian textile firms, the authors believe that successful implementation of change is determined by the following factors, shown in Figure 1: model and implementation plan for change, organizational culture and human resources that contribute decisively to the success of any kind of changes.



**Figure 1:** Factors contributing to the successful implementation of a change Source: (authors)

It can be said that the most valuable asset of a company is considered to be the human capital and its management lies at the boundary between science and art, therefore HR managers must possess equally relevant theoretical knowledge of business and personal skills in working with people(Armstrong,2001).

A strong culture can be considered the internal mark that gives to the organization's staff the same value as that given by the company's public relations department on foreign markets. Creating a suitable culture in a dynamic market is a challenge for

the current context: Culture is more important than the product. Increasingly often, companies have to sell culture and brand image, not just products, to defeat their competitors.

In the case of companies that have a strong culture, how to act is clearly systematized, it is communicated to the staff and even the newest employee knows and understands it. After all, in the case of the human resource management, forecasting plays a key role, if not a decisive role, in difficult times such as changes or crisis situations because the actions or the activities of a company are accomplished through people who have to be prepared for these moments, both professionally and individually, personally

## **2. Continuous training in the technological development**

The orientation towards a knowledge-based society requires investment in human resource development in order to encourage employees to acquire new skills and accept occupational mobility. At the same time, it is important to promote quality training offer and ensure its relevance in relation to skills, knowledge and individual needs. The acquisition of knowledge and skills can improved labor market position, while at the same time increasing productivity. Rapid changes in all areas cause a more dynamic spectrum of needs for new skills. „Human resources are seen as the crucial production factor, active and decisive, and the investment in training benefits both the person and the society” (Viăsceanu,2003).

The current situation shows that Romania has made progress in restructuring the system of continuous training. One of the courses of action to provide the necessary skilled labor / skills for companies is the lifelong learning policy correlated with labor market developments through wide consultation of social partners, businesses, other institutions / organizations involved in the system. (European Strategy for Employment).

### **2.1. The results of the research**

The Environment in which the research was done consists of textile profiled companies from Romania. For data collection a questionnaire was prepared for all human resource textile companies.

We chose in the sample to include the staff of several companies (SMEs and large companies), their structure reflecting the structure of human resources in this area. The choice of sampling strategy was made with judgment, thus companies in different cities namely (Arad, Timisoara, Baia Mare, Iasi and most of Satu Mare) having been selected in order to ensure a maximum possible representation, (Lewin ).

After a verbal participation agreement given by the management of each company, 1400 questionnaires were anonymously distributed, and of all the questionnaires we received a rate of 53%, that is 740 questionnaires. The period of practical research was 20.02.2012 -20.12.2012.

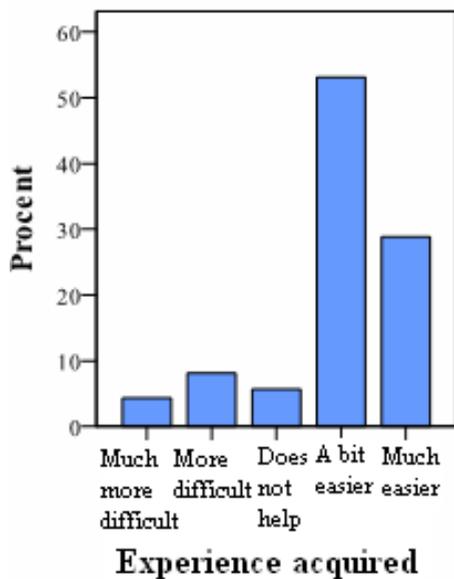
Following the questionnaire applied, we found: for employees to perform tasks properly, continuous training is required even if the utility is not always seen by the operators.

To "Question.1.3.": *The fact that a person goes through several organizational changes accumulating some experience helps him/her to overcome more easily the*

current changes?“ I had the following response: Much more difficult, more difficult, does not help, a bit easier, much easier.

**Table 1:** Usefulness of experience acquired throughout organizational changes

	Answers	Percent	Valid percent
Valid responses from 710 subjects	30	4.0	4.2
Much more difficult			
More difficult	57	7.7	8.1
Does not help	40	5.4	5.6
A bit easier	380	51.4	53.5
Much easier	203	27.4	28.6
Total answers	710	95.9	100.0
Missing answers: 30 subjects did not answer this question	30	4.1	
Total subjects	740	100.0	



**Figure 2:** Usefulness of experience acquired throughout organizational changes  
Source: (authors)

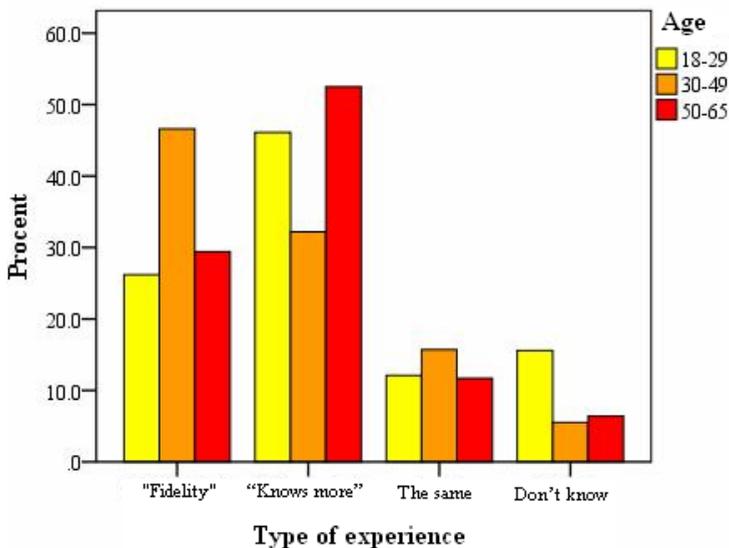
Responses were:

- 53.5% of respondents believe that any professional experience helps them to overcome a bit easier the present organizational changes;
- For only 28.6% of subjects work experience helps them move much easier through present changes ;

- The research results show that with age it is more likely to accept that professional experience may counteract any change;
  - There are differences between the answers given by the management of companies and the operators. The latter, in a small percentage believe that experience does not help, or helps quite little (much more difficult)
- To "Question. 2.5. *"In performing professional duties in terms of organizational change what experience helps more? The "fidelity" type (accumulated after many years of practicing one job) or that of "know more" (accumulated by practicing many professions)?*" I had the following response: "Fidelity", "knows more" Also, I do not know.

**Table 2:** Type of experience

	answers	Percent	Valid Percent
Valid responses from 732 subjects			
"Fidelity"	267	36.5	36.5
"Knows more"	309	41.9	42.2
The same	99	13.4	13.5
Don't know	57	7.7	7.8
Total responses	732	99.0	100.0
Missing answers: 8 subjects did not answer this question	8	1.0	
Total subjects	740	100.0	



**Figure3:** Type of experience and age  
Source: (authors)

The responses were:

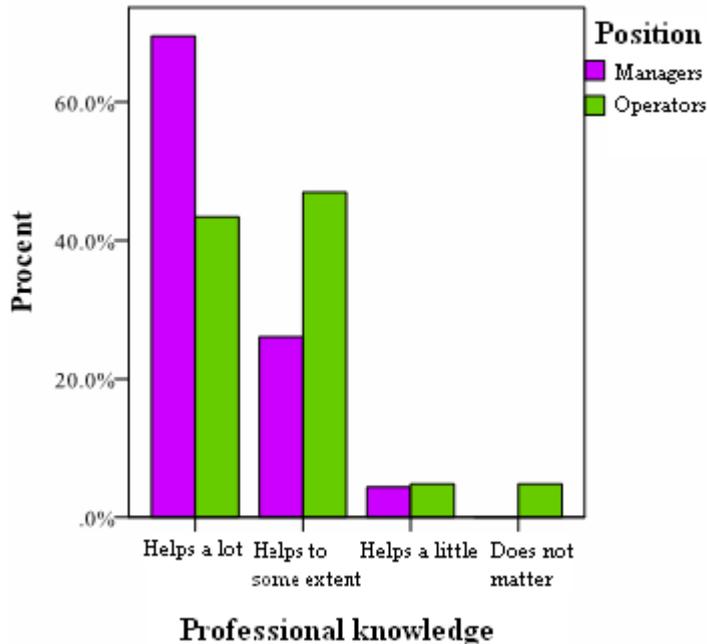
- 42.2% of respondents believe that for the achievement of professional duties in terms of organizational change, the "know more" type of experience accumulated by practicing more jobs, is more helpful while 36.5% believe that only the "fidelity" type of experience accumulated by practicing for several years one single job, can help in a time of change;
- subjects aged 30-49 consider that the "fidelity" type of experience accumulated by practicing for several years one single job, helps more. To be noticed however, that younger generations have felt the labor market as being very flexible and appreciate the experience of "knowing more" (accumulated by practicing many professions).
- The managers are those who want subordinates with experience, practicing several professions, while operators believe that for the achievement of professional duties in terms of organizational change, the "fidelity" type of experience accumulated by practicing more jobs, is more helpful.

To "Question. 2.7. *Before a change, or even during it, the organization can make available to its employees theoretical and practical knowledge through courses and trainings. How much would this knowledge help move more easily over change and get accustomed to the new circumstances?*" I had the following response: Helps a lot, helps to some extent, helps a little, does not matter.

**Table 3:** Professional knowledge

	Responses	Percent	valid percent
Valid responses from 724 subjects			
Helps a lot	324	43.8	44.8
Helps to some extent	331	44.7	45.7
Helps a little	32	4.3	4.4
Does not matter	37	5.0	5.1
Total responses	724	97.8	100.0
Missing answers: 16 subjects did not answer this question	16	2.2	
Total subjects	740	100.0	

Source: (authors)



**Figure 4:** Professional knowledge depending on the position in the company  
Source: (authors)

The responses were:

- approximately 90% of subjects considered that both the theoretical knowledge and the practical one help in a time of change;
- Managers argue that professional knowledge helps a lot, but most of the operators feel that it helps only to some extent;
- most respondents regardless of age, believe that by continuing professional qualifications they can adjust easier during organizational changes.

### 3.Conclusions

It can be said that the human factor is the key of the organizational changes if we take into account its qualifications and experience.

Garment textile and leather industry in Romania needs strong and relevant skills and abilities to successfully compete on this market. Of course they are different for each company. However, there are some common problems of competencies, skills, education and training that have an important role in increasing the competitiveness of many companies in the Garment Textile and Leather Industry.

It is needed now more than ever that manufacturers invest in training and in the specialization of labor, which is an important condition in the growth of the competitiveness on the textile and leather market. We must understand that the application of the law concerning the employer's obligation to periodically improve the workforce is also needed (NSTGLI).

In conclusion, the life of an organization, the change of any kind or the crisis situations are done through the people who have to be prepared for these times,

both professionally and individually-personally. Obviously, the human resources manager must act before these events take place, prediction playing an essential role.

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# ENTREPRENEURSHIP CURRICULUM IN ROMANIAN UNIVERSITIES

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## **Abstract:**

*The central focus of universities should be the improving the quality and quantity of entrepreneurs or students with an entrepreneurial attitude. We argue that the academic field of entrepreneurship is at a very low level in Romania on several axes and the University must determine the best fit for them given their students, their alumni, their stakeholders, the region and its economic base and the aspiration of institutions. Entrepreneurship should it be something that will have high and positive impact for students not just another course in the curriculum. Entrepreneurship is concerned with establishing new activities and about being able to perceive new opportunities. Entrepreneurship competence is relevant for all areas of working and business life, in both new and established activities and enterprises. The aim of this paper is to provide an analysis of the present situation and recent evolution of entrepreneurship education in Romanian universities and to discuss these courses and curricula match the demand for entrepreneurial competences. This paper presents a short summary of the status of entrepreneurship curriculum and different challenges. The information collected through the Internet refers to the academic year 2012-2013. The range of theoretical choices, objectives, publics, pedagogical methods and institutional context should be structured around a general framework.*

**Keywords:** *Entrepreneurship education; Romanian universities; Curricula; Learning process, Institutional context.*

**JEL classification:** *L26; I25.*

## **1. Introduction**

Entrepreneurship has become an academic and teaching field (Davisson, 2003), considering the increasing number of programs and courses offering by universities. The promotion of entrepreneurship in education and training is an area that has been given broad priority in the EU. Due to emphasis in the Lisbon process on economic growth, entrepreneurship and innovation have been given increased attention within the education systems.

Despite the desperate financial disposition at universities today, entrepreneurship education continues to play a vital role at universities level. Increased competition from companies, international schools, the Internet, and a decrease in the number of foreigners applying to graduate schools has not stopped universities from building their entrepreneurship programs. This article will show that there is still a strong demand for entrepreneurship faculty.

The field of entrepreneurship education has been one of the hottest areas of study in higher education at colleges and universities throughout the world. Several researchers (see Finkle, 2001, Solomon et.al, 2002; Katz, 2005; Finkle, Kuratko, and Goldsby, 2006; Solomom, 2006) have done research on various aspects of entrepreneurship education.

Entrepreneurship education is able to address some of the deficiencies in the existing education system. Firstly, the development of entrepreneurial skills in the education system increases the supply of nature entrepreneurs in the country. A venture support system based on entrepreneurship education designed to stimulate and facilitate entrepreneurial activities, could result in a lower unemployment rate, increased establishment of new companies, and fewer failures of existing businesses. Entrepreneurship students do not simply learn small business information; they use it by writing business plans, launching and managing venture start-ups, and providing consulting services to prospective business owners (Kotts, 2011).

Nowadays, students have a need-to-know, short-term and goal-oriented world view that contrasts with the professor's values of life-long learning for learning 'sake (Lane, 2011). We must understand how curricular changes might affect student learning and how effective classroom teaching can accommodate changes in student learning styles and values.

There is a need to develop an education system that to a greater degree gives the students of today knowledge and skills adapted to the challenges of the future.

## **2. Data and methodology**

In order to elaborate a diagnosis regarding the current status of entrepreneurship education in Romanian higher education, we carried out a preliminary research. I selected seven universities from Romania. The most important criteria for selecting universities were: the most representative public university from each region from Romania which including also management and economics faculties.

The survey is based on data and information collected through the Internet. The information about the curricula offered by Romanian universities is available on the website. Once a course or curriculum was identified, it was easy to collect additional information about it. The Internet source is appropriate for the aim of this study as all Romanian universities supply information on their curricula and courses through this medium. All universities give basic information about the course on their web site, and most of them also supply detailed information about the content of the courses. The information was collected in 2013 from the website.

A common problem of survey about entrepreneurship courses is the separation of courses and curricula specifically devoted to entrepreneurship from those referring, more generally, to small business or innovation. In the analysis, we included all those courses and curricula that specifically referred to entrepreneurship. We also retained courses and curricula on small business and Management of innovation when they have a significant part dedicated to entrepreneurship issues.

As regard the cultural traditions prevailing in the Romanian university system, the one that has the greatest impact is the separation between theoretical and practical knowledge, the former being considering superior to the latter. Universities are the places where theoretical knowledge is developed and transmitted, with less attention paid to its practical use. This is reflected not only in the content of courses but also in the teaching methodology which is almost exclusively based on lectures with less consideration for the active role of students.

Information about courses related to entrepreneurship that have been identified in each university from our study is summarized in two tables. In Table 1 are summarized identified courses at undergraduate level and Table 2, courses at

master level as follow:

**Table 1: Entrepreneurship courses at first-degree level offering by Romanian universities (faculty of economics)**

University	Faculty	Course Title	Access Optional/ Compulsory	Credits (ECTS) No.
West University of Timisoara	Faculty of Economics and Business Administration	The Administration and Development of Tourism Enterprises; Entrepreneurial Simulation; European Business Environment and Competitive Strategies; Management & Leadership; Entrepreneurship & Leadership; Entrepreneurship Business Formation Start-up and Development; Entrepreneurial Marketing; E-business; Entrepreneurial Strategies and Business Internationalizations; Leadership and Entrepreneurship; Entrepreneurial Marketing; Entrepreneurship; New Product Development;	Compulsory and Optional	4-8
Babes-Bolyai University	Faculty of Economics and Business Management	Entrepreneurship; Internet usage in business; Marketing innovation and new products (optional); Business Communication;	Compulsory	4-6
Al. I. Cuza University	Faculty of Economics and Business Administration	Techniques and spirit of negotiation	Compulsory	6
Transilvania University	Faculty of Economics and Business Administration	Risk management; Business Communication; Entrepreneurship and Business Strategies.	Compulsory	5-6
Ovidius University of Constanta	Faculty of Economics	Entrepreneurial management;	Compulsory	4-6
University of Craiova	Faculty of Economics and Business Administration	Entrepreneurship, Entrepreneurship and business development (master program);	Compulsory	4-6

The Bucharest University of Economic Studies	Business negotiations; Social Entrepreneurship; Entrepreneurship and Business development (master program); On-line business administration; Business negotiation strategies and conflict management	Compulsory	4-6
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University name	Faculty name	Course Title	Access Optional/ Compulsory	Credits (ECTS) No.
West University of Timisoara	Faculty of Economics and Business Administration	Innovation Management, E-business, SME management	Compulsory and Optional	6
Babes-Bolyai University	Faculty of Economics and Business Management	Investment management	Compulsory	4
Al. I. Cuza University	Faculty of Economics and Business Administration	Entrepreneurial finance; International business negotiations; Initiating and managing small business;	Compulsory	4
Transylvania University	Faculty of Economics and Business Administration	Leadership; Entrepreneurship and Business Strategy; E-business; Entrepreneurship; Risk management.	Compulsory	5-6
Ovidius University of Constanta	Faculty of Economics	Entrepreneurial management; Entrepreneurship.	Compulsory	4-6
University of Craiova	Faculty of Economics and Business Administration	Leadership;	Compulsory	5
The Bucharest University of Economic Studies		Entrepreneurial culture; Business negotiations; Social entrepreneurship;	Compulsory	4-6

**Table 2: Entrepreneurship courses at master-degree level offering by Romanian universities (faculty of economic).**

### 3. Entrepreneurship education in Romanian universities

In some educational study programs, the Ministry of Education determines national curriculum regulations that specify the content of the programs at overarching level. Table 1 show the list of entrepreneurship courses offered in Romanian universities

in the academic year 2012-2013 at graduate and table 2 at postgraduate levels, respectively. Given the small number of courses, no statistical analyses have been carried out, but only a qualitative analysis of their content and their position within the curriculum was made.

Concerning the academic year 2012-2013, the university from our study offered entrepreneurship courses. Even if, we have in curriculum some entrepreneurial courses, there are still challenges, and work on entrepreneurship will continue to be in constant development.

Looking the content of the courses, most of them were dedicated to the various aspects of start-up: how to develop a business plan, what are the characteristics of an entrepreneur, what skills are needed and how to raise funds. However, even these courses devoted a significant amount of time to business planning.

Above all, three aspects characterized entrepreneurship courses in Romanian universities:

- They were present almost exclusively in economics and management faculties;
- Their main focus was on the start-up of new businesses;
- Their main aim was to transfer knowledge and competences to the development of the business plan.

There are some universities that offered a specific curriculum in entrepreneurship. Concerning the Master programmes, Table 2 shows that there was a significant increase in the supply of curricula in the last few years. This is because the master programs are more flexible than licence programs. For example, West University of Timisoara started a Master programme in “Entrepreneurial management”. Also, The Bucharest University of Economic Studies and University of Craiova have a master’s programme in “Entrepreneurship and Business development”.

Recognizing the importance of entrepreneurship education, several universities from Romanian started a number of extra-curricular initiatives dedicated to stimulating the start-up of new firms, soft skills development, especially among students and researchers. One of the most widespread activities in this area is the organization of business plan competitions. Within these competitions’ courses on business planning are normally offered. In all cases, these initiatives and courses continue to be outside the official university curricula. An extra-curricular program offered by universities is closely related to the financial potential. Regarding public university, the allocated budget is still very low, in other cases even missing.

Together with developing specific skills for business start-up, entrepreneurship education in higher education, especially those at first-degree level should pursue the following objectives:

- Enhance knowledge about the phenomenon of entrepreneurship and its role in the economic system and society as a whole;
- To promote entrepreneurship as a useful and respectable career prospect for graduates;
- Develop those competences, like relational and leadership competences that can contribute to the development of entrepreneurship.

Additionally, the portfolios of courses must answer very simple question: what in entrepreneurship? Is it for me? When is an idea a business opportunity? I have an idea, what should I do next? (Vyakarnam, 2012). The development of curriculum based around these kinds of questions has been positive, and suggestion is that

each university that is seeking to initiate entrepreneurship programmes finds the questions that are most relevant to its audiences and helps to answer them.

Compared with other disciplines, the entrepreneurship discipline is in its infancy, with no standard framework or agreed upon best practices (Solomon, 2007; Fiet, 2001). Our study indicates that entrepreneurship education exist mostly at the graduate and postgraduate level through business management courses. Although in many developed countries, the existing curricula encourage students to take initiative and responsibility, examples of more explicit entrepreneurship educations are few. Coherent initiatives or educational programs on entrepreneurship by state authorities are still rare in the field of school education.

Besides these general reasons, another important factor is the rigidity of the Romanian academic system. In Romanian, if you want to become a teacher within the university, you must have a PhD. Diploma. This requirement it is very difficult to accomplish by the practitioner because a PhD. Programme required a lot of time, and if you already run a business it is very difficult to have it.

If we consider that the entrepreneurship education is more effective if it is teach by entrepreneurs of practitioner, the system must allow them to teach without PhD.

To accelerate the closeness between academia and business, the system must allow an official partnership between teachers and practitioners. Therefore, the teachers can expose the theoretical aspects and the practitioners the practical part. They must collaborate in order to adapt the curriculum at the market demands. As a first step, it would be better if the university has an advisory Council formed by practitioners from each domain. This is necessarily because the besides the content of entrepreneurship courses, entrepreneurship education should address the present needs of the Romanian economic system. The best people to deliver education to students that will enable them to become entrepreneurs are practitioners whom themselves have the expertise and experience of entrepreneurship (Vyakarman, 2012).

The educational programme on entrepreneurship should aim at developing the following levels of learning: entrepreneurial attitudes, values and motivation; ability to develop networks and relational skills; skill-building courses in negotiations; new product development; creativity and innovation; creativeness and opportunity recognition; knowledge of institutional facts about entrepreneurship. Opportunity identification has also been identified as critical entrepreneurial skills that should be included in entrepreneurship curriculum (Shane & Venkataraman, 2000; Hindle, 2004). Educating students on entrepreneurship and how to become more entrepreneurial are also significant components of entrepreneurial education (Rae, 2000). Understanding the role of networks, and the stakeholders it is considered as important entrepreneurial concept (Taylor and Torpe, 2004).

In a more general perspective, entrepreneurship education should help students increase their “entrepreneurship awareness” and enlarge their perception and vision of social and institutional facts. At a more advanced level, (Master and postgraduate courses) students can acquire the technical abilities for an evaluation of new businesses opportunities and for new a venture creation (Iacobucci and Micozzi, 2012).

Gibb (2002) and Sogunro (2004) consider that traditional teaching methods such as lectures are less effective in teaching entrepreneurial principles. This is because the entrepreneurial skills can be developed with practical and dynamic methods.

Entrepreneurship courses and curriculum must be designed to encourage and stimulate business start-ups and in the same time to ensure the development of necessary skills: personal characteristics, interpersonal and networking skills, critical and creative thinking skills, practical skills, proactive empowerment, negotiation, leadership. The most used pedagogical approach is the writing of a business plan (primarily learning tool). At each level of education, it is reasonable to expect different outcomes as students mature and build on previous knowledge. But the overall purposes remain to develop expertise as an entrepreneur.

Curriculum development for entrepreneurship education should incorporate the principles of experiential and contextual education. Students can best develop the knowledge and skills necessary through the application of curriculum objectives in situations that replicate the business world. Simulations, role-plays, community based learning projects, student enterprises, and competitive events can all be powerful instructional activities when linked closely to the curriculum.

#### **4. Conclusion**

The role of universities in this context is to develop new knowledge and methodologies for teaching and carrying out research on entrepreneurship rather than simply starting a course. The limited presence of entrepreneurship courses and curricula in Romanian higher education system does not mean that the entrepreneurship as a strategic field is completely neglected in their activities. Issues such as accreditation, program funding, faculty goals and current programs clearly impact the importance of these criteria for anyone wanting to create a new, comprehensive programme in entrepreneurship (Heriot and Simpson, 2007).

Considering the actual supply of courses and curricula does not always respond to the demand for entrepreneurial competences. We believe that the actual supply of courses and curricula in Romanian universities, and their slow growth after the implementation of Bologna system started in 2005 does not always responds to the demand for entrepreneurial competences not only in quantitative but also in qualitative terms. The show pace with which Romanian universities are following the global trend in the development of entrepreneurship courses and curricula depends on two main factors related to the supply side: the presence of a cultural tradition that does not favor entrepreneurship education, and the rigidity of the Romanian university system when changing courses and curricula.

The main obstacles to increase courses in entrepreneurship offered by Romanian universities are: (1) centralization and organizational inertia of the higher education system; (2) diffidence about "practical knowledge" in higher education; (3) only few academics are committed to the subject; (4) lack of cooperation with international universities; (5) low wages.

Entrepreneurship education must cover all education stages. The overall goal must ensure that young people can progress coherently in acquiring entrepreneurial competences across all stages of the education system.

Formal education must encourage the entrepreneurship. Entrepreneurial education therefore needs to focus on knowledge of small business ownership and self-employment, as well as entrepreneurial skills and attributes which cannot be fostered through traditional teaching methods. Action learning, learning by doing, learning by experience, learning by mistakes represent the paradigm to build up a teaching method that improves entrepreneurial attitude, problem solving, entrepreneurial

skills, opportunity recognition (Iacobucci and Micozzi, 2012). In addition to that needs, we must consider the student journey from wanting to raise awareness through to seeking help and support in creating ventures.

There is a clear cut role for the faculty to develop appropriate curricula and to create a learning atmosphere but without the active engagement of practitioners such as entrepreneurs who have been invited and carefully briefed then it is very difficult for students to “feel” that they are gaining real practical knowledge that will enable them to actually go out and create a new venture or become more employable.

As a recommendation, in order to improve the entrepreneurship curriculum it is necessary to have some standards and performance indicators framework. Using a coherent framework, we can build for students: progressively more challenging educational activities; experiences that will enable them to develop the insight needed to discover and create entrepreneurial opportunities; and expertise to successfully start and manage their own businesses to take advantage of these opportunities.

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# A STUDY ON THE CULTURAL DIFFERENCES BETWEEN PUBLIC AND PRIVATE HOSPITALS FROM BUCHAREST

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**Abstract:** *Turnover rates for hospital personnel (nurses, doctors and auxiliary staff) have been increasing in recent years, especially in the public sector, being the result of a couple of factors. I believe that one of the main causes is related to organizational culture aspects. This research analyses if dated facilities, unpleasant work environment and lack of personnel contribute to a low job satisfaction and involvement. The study also compares the results obtained from persons working in the public sectors with the results given by respondents from private clinics. An organization's culture could be strong or weak, being dependent to cohesiveness, value consensus and individual commitment to collective goals. Effective cultures help organizations anticipate and adapt to environment changes, thus proactive cultures should enhance and support profitability on the long-run. This research also investigates strength of the occupational culture by comparing the results obtained in the public sector with results from private sector. My study is developed on 63 professionals working in the medical system and it is based mainly on quantitative methods. The instrument of the research is the structured questionnaire. The main goal of the study is to highlight the significant cultural differences between the state-owned and public-owned hospitals and to assess if they have a greater influence to the institutions, as compared to common occupational values and norms. The implications of my research for the field of organizational behavior refers to the fact that I have identified the organizational elements that are common to both public and private hospitals, influenced by a strong occupational culture, and those that differ significantly, being the result of underfunding and poor management. As a conclusion, I consider that this is a great starting point for further research in the field and I plan to enlarge the investigation on a greater number of respondents and to come up with solutions for the identified issues.*

**Keywords:** organizational culture; high-performance cultures; medical system

**JEL classification:** M14; L32

## 1. Introduction

Culture can be broadly defined as “a set of basic tacit assumptions about how the world is and ought to be that a group of people share and that determines their perceptions, thoughts, feelings, and to some degree, their overt behavior (Schein, 1996). Moreover, according to Hofstede (1991) there are three main factors that influence the behavior of a person in the workplace: national culture, occupational culture and organization culture.

National culture is mainly based on differences in values that are learned in early childhood from the family. These values have a significant impact on a person's beliefs and are very unlikely to change over time. Occupational culture is acquired

through schooling and training between childhood and adulthood. Moreover it consists of values and shared practices (learned perceptions about how things should be done in the context of an occupation). Lastly, occupational culture is based on the norms and shared practices which are learned in the workplace. The influence that occupational and organizational cultures exert on people's behavior varies significantly over organizations (Trice and Beyer, 1993). Some professional groups have the exclusive right to perform certain kinds of work, to control the training requirements for performing that work and to control how the work is performed. Because of these constraints and due to the fact that the behavior of these professionals is mainly influenced by their occupational culture, the organizational cultures associated with them are only slightly influenced by administrative practices. On the other hand, the behavior of professionals from occupations that are less regulated can be influenced to a greater extent by the organizational culture. National culture can also be a barrier to organizational culture implementation, such as when transferring technology across nations or creating culturally diverse work teams.

The need for experienced physicians in management is growing, taking into account the dynamic nature of the competitive environment. Experienced physicians cure patients, but also accumulate direct expertise regarding how things should be done within the organization. Hospitals should value their input, if they want to increase their profitability in such a competitive and complex type of organization (McAlearney et al, 2005). Researchers have also studied the increasing turnover rates for hospital personnel in recent years, which have been found the result of increasing pressure on medical staff from higher productivity expectations in a managed care environment (Gifford and Zammuto, 2002).

## **2. Literature analysis**

Edgar Schein (1985) defines culture in terms of basic assumptions, shared beliefs or values. He considers that culture exists at three levels: basic assumptions, values, and artifacts and creations. Organizational culture consists of a set of social norms that define which behaviors are appropriate and which aren't within an organization. Nevertheless, organization culture is not necessary homogenous across all departments of the organization, as some norms might be embraced by all members of the organization, while different groups within the organization might develop their own sub-cultures. There were many studies and research that has been conducted about organizational culture recently. This interest was generated by the acknowledgement that an organization's culture could influence its short and long term performance.

Organizational culture is "the set of shared, taken-for-granted implicit assumptions that a group holds and that determines how it perceives, thinks about and reacts to its various environments" (Schein, 2004). According to this definition, there are three main characteristics of organizational culture. Firstly, organizational culture is passed on to new members of the organization through socialization. Secondly, the definition highlights that our behavior at work is influenced by organizational culture. Last but not least, organizational culture operates at different levels.

Organizational culture has three essential layers: artifacts, espoused values and basic assumptions. Each level varies in terms of visibility and resistance to change and each layer influences another layer (Dorothy and Leidner, 2008). The most

visible level is represented by artifacts. Artifacts are the physical manifestation of an organization's culture and include acronyms, myths, stories about the organization, observable rituals, decorations, office layout, awards or dress codes. This layer also consists of the visible behaviors exhibited by individuals or groups. One important characteristic of artifacts is that they are easier to change, as compared to the less visible levels of organizational culture.

The next layer of organizational culture is represented by espoused values. Values are concepts and beliefs that refer to desirable end states or behaviors, guide selection or evaluation of behavior and events and are ordered by their relative importance. Espoused values are the explicitly stated values and norms that are preferred by an organization. Nevertheless, there are cases in which aspirations do not have a direct result in employee behavior, as individuals are guided by enacted values. Therefore, enacted values represent the values and norms that actually influence and shape employee behavior. It is essential to reduce the gaps between espoused and enacted values, as this discrepancy can significantly influence employee behavior and organizational performance, in a negative manner (Schwartz, 1992).

The third level of organizational culture is represented by basic assumptions, which are unobservable and represent the core of organizational culture. These values become so important over time, that they will become assumptions that guide employee behavior. Organizations are likely to attain their goals when there is an inconsistency between espoused values and the behavior needed to accomplish the goals. Moreover, it is hard to promote and implement organizational change, if it is based on values that are not consistent with employees' own values (Reinter and Kinaki, 2009).

## **2.1. Manifestations of organizational culture**

In addition to the physical artifacts of organizational culture, cultural assumptions are passed down to new employees through socialization, subculture clashes and top management behavior. For example, a new member of the organization will not come late again, if someone tells him a story about a former employee that was fired because of a similar behavior. Similarly, top management can enhance product quality through the implementation of administrative and reward systems, as well as through the behavior they model. According to Sathe (2000), there are four general manifestations of organizational culture: shared things (objects), shared sayings (talk), shared doings (behavior) and shared feelings (emotion). Cultural information can be collected within an organization by asking, observing, reading and feeling.

Organizational culture fulfills four functions. First, organizational culture gives its members an organizational identity. Secondly, organizational culture facilitates collective commitment. In other words, organization's culture should create an environment that stimulates its members to be committed to the organization's mission. Thirdly, it promotes social system stability, which means it improves the positive and reinforcing perception of the environment by the employees and it manages conflict and change in an effective manner. For example, emphasizing on performance-based awards and celebrating success is a good technique to lower employee turnover. Fourthly, organizational culture shapes employee behavior by helping members make sense of their surroundings. Therefore, this function of

organizational culture helps employees understand its mission and how it will attain its goals (Kotter, 1992).

## **2.2. Types of organizational culture**

Researchers have conducted numerous studies regarding the relationship between types of culture and organizational performance, motivated by the possibility that certain cultures might be more effective than others. Nevertheless, researchers haven't reached a consensus regarding a universal typology of cultural styles.

Generally speaking rather than presenting a definitive conclusion about the existing types of organizational culture, most of the scientific literature talks about three types of organizational culture: constructive, passive-defensive and aggressive-defensive, each having its own set of normative beliefs. Normative beliefs reflect individual's thoughts and beliefs about how members of a specific group or organization should approach their work tasks and interact with others. In a constructive culture members are encouraged to interact with others and to work in projects that will satisfy their needs to grow and develop professionally. Therefore, this type of culture promotes normative beliefs that are associated with achievement, self-actualization and so on. Oppositely, passive-defensive cultures promote the belief that employees must interact with others in ways that do not threaten their job security. Therefore, this type of culture promotes normative beliefs associated with approval, conventional, dependant and avoidance. Last but not least, organizations with aggressive-defensive cultures encourage employees to have a competitive approach when it comes to protect their status and job security. These cultures promote normative beliefs associated with power, competitively, perfectionism or opposition.

Assessing an organization's culture is not an easy task, as the actual values and norms in an organization do not necessary correspond with the officially espoused ones. Several methods have been developed to conceptualize and assess organizational culture. In a study, Hofstede et al. (1990) assessed the values and perceptions of daily practices of employees from 10 different organizations from Denmark and Netherlands and revealed six main dimensions of cross-organizational variability: process versus orientation, employee versus job orientation, parochial versus professional identity, open versus closed systems, loose versus tight control and normative versus pragmatic mentality.

Process vs. result orientation reflects whether the organization is more concerned with the procedures that must be carried out or with the goals of the organization. Process-orientation is typical to bureaucratic organizations, while results orientation is characteristic to risk-taking organizations that value innovation and tolerate mistakes. The employee vs. job orientation reflects if the organization is concerned with the well-being of its employees or it focuses on getting the job done. In employee-oriented cultures decisions are taken by groups, while in job-oriented cultures decision-making is individual and implements from top to bottom. The parochial vs. professional dimensions reflects the weight that is given to the occupational cultures of the organization's members. On one hand, in parochial organizations employees identify with the organization, whereas in professional cultures employee identify with their profession. When hiring new employees parochial organizations take into account the social background, whereas professional cultures hire on the basis of job competences. An open vs. closed system refers to the communication climate within an organization. In open system

cultures information flows through the organization, whereas this doesn't happen in closed cultures. In tightly controlled cultures, there is a strict control over individuals, while loose-control organizations are permissive with individual's behavior. Lastly, pragmatic cultures are market-driven and open to innovation and fast solutions, whereas normative cultures focus on institutional rules.

### **3. Research methodology**

The main objective of my scientific endeavor concerns the analysis of the cultural differences between the public and the privately owned hospitals in Romania. This research is based on non-probabilistic sampling, more specifically on rational theoretical guided sampling. I have selected medical personnel from public and private hospitals located in Bucharest and used primary data collection, such as questionnaire and face-to-face interviewing, for this empirical study. The studied population is represented by medical personnel from public and private hospitals located in Bucharest. As far as the application of the questionnaire is concerned, I used a mixed strategy. On one hand, I sent questionnaires by email to 90 persons working in the medical field, of which only 32 have been returned, 31 being valid. On the other hand, I went to the Romanian College of Physicians headquarter and managed to fill 32 questionnaires. All the questionnaires were checked for validity, before numbering and loading them in a SPSS 17, data processing software. The graphs and the frequency were generating using this software. Taking into account the objectives of the research and the nature of the variables, the main analysis used were frequencies, Chi Square Test and the Correlation Coefficient.

### **4. The results of the research**

After analyzing the answers given by the participating medical personnel, there were noticed significant organizational culture differences between the persons working in the public hospitals and the ones working in private clinics. At the most visible level of culture, represented by artifacts, there are significant differences between the two groups. When testing the links between the ownership of the institutions and the perception of the medical staff about the facilities, the equipment and the layout of the work environment, it was observed a relationship of high intensity (Correlation coefficient=0.815, Sig.=0.012) and statistically valid (Chi-Square statistics revealed that none of the expected frequencies are less than 5, so these results are statistically valid). Moreover, 63% of the persons working in public hospitals responded that they are dissatisfied with facilities offered, whereas 68% of the persons working in private hospitals consider they have access to proper equipment. On the other hand, there is a small correlation between the number of years spent in the organization and the perception regarding the quality and efficiency of the technical equipment (Correlation coefficient=0.248, Sig.=0.05). Similarly, the position in the organization has no influence on their perception regarding the visible artifacts (Correlation coefficient=0.03, Sig.=0.982), which gives more weight to the relationship between the institution type (public or private) and the perception regarding the offered facilities.

When testing if the work climate is pleasant or not, there were differences in perception between the two groups. Therefore, the relationship between the work climate and the type of the organization is strong (Correlation coefficient=0.79, Sig=0.00) and show that 91% medical staff working for private hospitals are satisfied

with the work environment, as compared to only 10% of the persons from public hospitals.

The analysis of the data also revealed that there is a weak but not statistically valid correlation between the government and private funded hospitals, in terms of how clear the mission is for its members (Correlation coefficient=0.23, Sig=0.84). This result can be interpreted through the occupational culture perspective, as the core values and the mission of the medical personnel are acquired through schooling and through norms that are learned in the workplace. Nevertheless, there is a relationship of medium intensity (Correlation coefficient=0.49, Sig=0.00) and statistically valid (Chi-Square statistics revealed that none of the expected frequencies are less than 5) between the organization's type of funding and the perception of how well the institution fulfills its mission. Thus, 91.8% of the persons working in private hospitals consider their organization fulfills its mission efficiently, as compared to 44.7% of the medical staff from public hospitals.

Has been found a medium intensity relationship (Correlation coefficient=0.44, Sig.=0.00) between the two groups and the diplomatic leadership style. Thus, 92.8% of the persons working in private hospitals consider that all the operational aspects are tackled in a diplomatic manner, as compared to 51.4% from the public hospitals. Similarly the control test question revealed a relationship of medium intensity (Correlation coefficient=0.477, Sig.=0.00) between the type of the organization and an autocratic style of leadership (60.7% of the persons working in private hospitals and 28.8% of those who work in public clinics reject the assertion regarding the autocratic style of management).

According to the data analysis, there are weak relationships between perception of the persons working in public and private hospitals and the variables "my opinions are valued" (Correlation coefficient=0.209, Sig.=0.10), "communication with the organization's members" (Correlation coefficient=0.204, Sig.=0.208) and "access to information" (Correlation coefficient=0.09, Sig.=0.48). Both types of organizations allow the access to relevant information, communicate in an efficient manner and value the opinions of its members. One possible explanation to these results is the nature of the medical activity and the high professional expertise held by the members, which overcome the cultural differences between the organizations.

Have been identified a weak relationship between the two groups and the perception about how the organization acknowledges and rewards the success of its members (Correlation coefficient=0.241, Sig.=0.057). In addition, there isn't any relationship (Correlation coefficient=0.024, Sig.=0.851) between the perception of the groups regarding the celebrations and the events organized by the institutions, as almost all persons participate and have a good opinion about them.

The data analysis revealed a medium intensity relationship (Correlation coefficient=0.323, Sig.=0.01, Chi-Square statistics revealed that none of the expected frequencies are less than 5), that is statistically valid, between the two groups when it comes to their opinions regarding the manner in which hiring is made. Therefore, 82.1% of the persons working in private clinics consider the hiring is made according to the meritocracy principles, as opposed to only 48.5% from the public hospitals. There is a weak relationship between the perception regarding the job security and the affiliation to one of the groups (Correlation coefficient=0.104, Sig.=0.419, Chi-Square statistics revealed that none of the expected frequencies are

less than 5), 69% of the respondents from the private sector consider their jobs are secure, as compared to 82.8% of the persons from the public sector. Has been found a low intensity relationship between the funding type of the organizations and “the training programs” (Correlation coefficient=0.201, Sig.=0.115, Chi-Square statistics revealed that none of the expected frequencies are less than 5), “relationship with superiors” (Correlation coefficient=0.36, Sig.=0.781, Chi-Square statistics revealed that none of the expected frequencies are less than 5) and “professional evolution since being part of the organization” (Correlation coefficient=0.296, Sig.=0.0185, Chi-Square statistics revealed that none of the expected frequencies are less than 5). The respondents are satisfied with the training programs (60.7% in private sector, 45.7% in public sector), consider they have evolved professionally (96.5% in private sector, 82.8% in public sector) and have a good relationship with their superiors (85.7% in private sector, 77.1% in public sector). Moreover, there is a relationship of medium intensity between the affiliation of the respondents and their perception about the level of remuneration, compared to their responsibilities and the work done (Correlation coefficient=0.401, Sig.=0.01, Chi-Square statistics revealed that none of the expected frequencies are less than 5). Therefore, 75% of the members from private sector are satisfied with the level of their remuneration, whereas only 45.7% from the public sector make the same claim. On the other hand, both groups have similar opinions regarding the relative importance of financial reward compared to professional satisfaction (Correlation coefficient=0.201, Sig.=0.115, Chi-Square statistics revealed that none of the expected frequencies are less than 5).

#### 4.1 Organizational culture in public and private hospitals

The respondents were asked to choose the myths they have encountered within the organization, from a list of ten options (*bad boss myth, historical efficiency myth, superior remuneration for extra-hours myth, nepotism myth, management decentralization myth, new technology myth, model employee myth, western models myth, opportunistic employee myth and reduced chances of promotion myth*). As it can be seen in Table 1, the employees from private sector mainly chose: the myth of the reduced chances of promotion, the myth of new technologies, historical efficiency and the nepotism myths. The members from public clinics chose: reduced chances of promotion, bad superior, historical efficiency and the perfect employee myth.

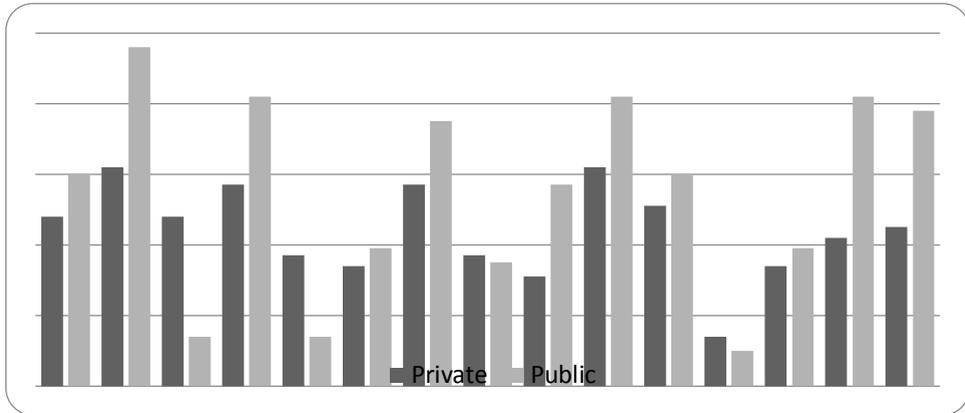
**Table 1:** Myths encountered within the organizations

Sector	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
Private (%)	22	31	11	25	8.5	34	14	25	20	34
Public (%)	32	32	21	14	14	25	28	21	25	46

Source: made by author

The respondents were also asked to select at least five values they believe in from a list of 15 possible options, (*work-V1, correctness-V2, autonomy-V3, pleasant work environment-V4, customer satisfaction-V5, perseverance-V6, continuous development-V7, innovation-V8, punctuality-V9, quality-V10, team work-V11, coordination-V12, loyalty-V13, respect-V14, and integrity-V15*). Figure 1 shows in percents, how many persons from each group chose the values mentioned above.

Therefore, the values chosen by most people working in private sector were: correctness, quality, pleasant work environment and continuous development. The respondents from public sector preponderantly selected the following values: correctness, respect, integrity, team work and quality.



**Figure 1:** Values in which the respondents believe  
Source: made by author

Taking into account the values and the myths found in these institutions, I can say there are important differences in terms of culture between public and private hospitals, even if the occupational culture has the most significant impact on medical staff. On one hand, in public hospitals the centralized decision making, the perception regarding the leadership style (autocratic), the myths selected (bad superior, historical efficiency) and the values chosen by the medical staff suggest the existence of a passive-defensive culture. Employees value job security and they interact with colleagues in ways that don't threaten their job security. Moreover, the public organizations are more concerned with the procedures and the internal rules rather than focusing on the end result. This approach is typical to bureaucratic organizations, as compared to private hospitals that encourage innovation, which can be seen in the values chosen by their medical staff (continuous development, innovation and quality). Public hospitals are job-oriented, as decision making is individual and implemented from the top of the institution to the bottom. In contrast, private hospitals are concerned with the well-being of their employees, as they are involved in the decision making and satisfy their needs to develop professionally, aspects with sustain the existence of a constructive culture in these institutions. Both organizations focus on the professional dimension, as hiring is made taking into account the qualification of individuals, rather than if they would socially fit within the organization. Given the field of activity, the employees identify mainly with their profession, rather than with the organization, as the values and shared practices acquired trough schooling have a powerful impact on medical staff. Public hospitals tend to be closed systems as the communication is not efficient throughout the organizations, while private hospitals score better in this respect. Last but not least, both types of hospitals are tightly-controlled cultures, as they put an emphasis on punctuality, rigor and no mistakes are accepted.

## 5. Conclusions

Turnover rates for hospital personnel (nurses, doctors and auxiliary staff) have been increasing in recent years, especially in the public sector, being the result of several factors. Dated facilities, unpleasant work environment and lack of personnel contribute to low job satisfaction, motivation and involvement. The research also reveals the existence of a strong occupational culture that is explained through the values and shared practices acquired through schooling and training. Nevertheless, there are still significant differences between the state-owned and private-owned hospitals.

A significant extent of the medical personnel working in the public sector are dissatisfied with the equipment and facilities offered by the institution. In addition, the study revealed differences in terms of the management styles used, as managers in public hospitals tend to tackle things autocratically, whereas managers in private clinics are more diplomatic and value more the opinions of the organization's members. Nevertheless, due to the dynamic environment of hospitals, the need for experienced medical professionals in management is growing. Physicians are the ones who cure patients, but they also influence the speed and extent to which changes are made in the organization. Therefore, hospitals should use their expertise and perspectives, in order to survive in such a competitive and complex type of organization. Only 45% of the personnel from public hospitals consider that their remuneration reflects the amount of the work done, as compared to 75% in the private organizations. These results should also be seen through the following perspective: all respondents have similar opinions regarding the importance of job satisfaction compared to financial remuneration. Therefore, even though the financial aspect is not defining for their activity, the level of the remuneration is so low that it influences negatively the job satisfaction and the work climate. Better remuneration would improve the effectiveness levels, as the impossibility of fulfilling the basic needs of the employees (the so-called hygiene factors) has a significant negative impact on performance. Moreover, implementing performance-based awards and celebrating success are techniques that will reduce employee turnover in public hospitals and stimulate the personnel to acquire new competencies and learn continuously.

Taking into account the strength and the major differences in terms of occupational culture compared to other fields of activity, medical personnel from both public and private sector share common values and myths. Therefore, both groups value team work, as every member of the organization must contribute when a task is given. Medical institutions should focus on quality services, customer satisfaction, as in hospitals patients need to be given the prime priority, and innovation, as advancements and innovations in medical technology make a difference.

As compared to the private sector, in the public hospitals there is a perception that hiring doesn't follow the meritocracy principles. The management should focus on hiring and developing the best people in order to improve the quality of the services and the organizational performance. Training is necessary not only to keep up with the latest technological breakthroughs, but also to reinforce the importance of a respectful treatment for the patient, as disrespectful manners are inherently poor service. In public hospitals can be identified elements of a passive-defensive culture, as in these institutions employee complain about the centralized and top-down

decision making, as well as reduced promotion opportunities. Medical personnel's opinions should be more valued, not only to increase their motivation, but also to get quality information from people that work directly with patients. On the other hand, private hospitals have a constructive culture, as employees value team work and the management is more decentralized, leaving the employees enough freedom to take decisions when necessary, without having to ask their superiors.

The limitations of this research refer to the number of respondents and their location, as the primary data were collected from medical personnel working in several hospitals located in Bucharest. I intend to extend my future researches to investigating medical personnel from other hospitals, as well regions of Romania. In addition, this study doesn't establish ways in which the cultural differences between organizations from public and private sector can be minimized. Taking into account these limitations, I will focus my future work towards eliminating these aspects.

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# COST OF QUALITY AND TAGUCHI LOSS FUNCTION

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**Abstract:** *An organization must take into account the costs associated with achieving quality because one of the important objective of continuous improvement programs is to meet customer requirements at the lowest possible cost. Hence, an organization needs to adopt framework to classify costs and to focus on existing cost of quality (CoQ) models. The objective of this paper is to give a survey of research literature and models on the topic of CoQ and to provide a basic understanding of quality costs.*

**Keywords:** *Quality Costs , Cost of Poor Quality, Cot of Good Quality, The Taguchi Quality Loss Function.*

**Jel classification:** *M11*

## 1. Introduction

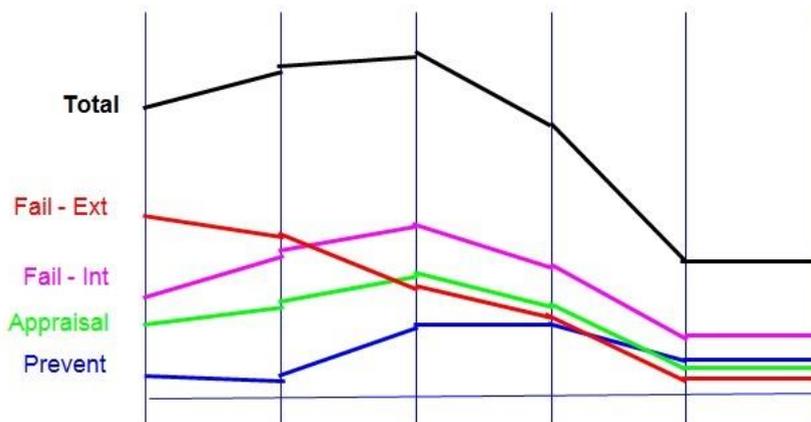
Many organizations consider improving quality as the best way to enhance customer satisfaction, to reduce manufacturing costs and to increase productivity. For this, the CoQ must be reduced. All quality management consultants tend to have quality cost programs as an integral part of their repertoire ( Suhansa Rodchua, 2006). Monitoring and controlling CoQ are becoming critical activities of quality improvement programs. Manufacturing companies tend to measure visible costs and ignore significant hidden costs that are difficult to measure such as opportunity costs. An approach for quantifying the opportunity costs is presented here.

## 2. Literature review

Three noted authors on quality management, Deming, Crosby and Juran each have a different attitude to cost of quality (CoQ). Deming's view is that cost analysis for quality is a misguided waste of time and measuring quality costs to seek optimum defect levels is evidence of failure to understand the problem. Crosby argues that quality costs need to be measured, not for management control, but for the development of "quality" thinking within the organization. The more popular approach is that of Juran who advocates the measurement of costs on a periodic basis as a management control tool.

To collect quality costs a firm needs to adopt a framework to classify costs. The Feigenbaum classification system is almost universally accepted (Plunkett & Dale, 1988). Feigenbaum(1974) identified three cost categories : prevention , appraisal and failure. Juran divided the failure costs into two categories: internal failure and external failure ( Juran & Gryna, 1970). Many writers such as Morse and Roth (1983), Ponemon (1990), Youde (1992), Ross(1993) have used Juran's classification system in their research.

To further facilitate understanding of cost of quality trends over time, the four cost categories are analyzed and presented in Figure 1.



**Figure 1:** Hypothetical Quality Costs Trends over Time

### 2.1. The COQ Models

In general, COQ models are classified into four groups:

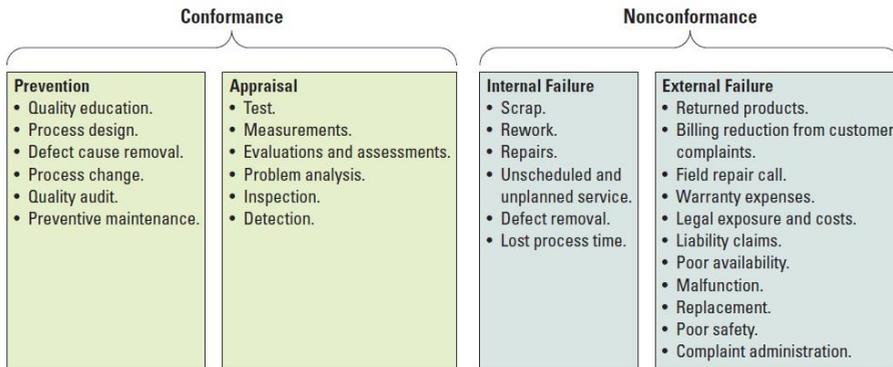
1. P-A-F models: Prevention costs+ Appraisal costs+ Failure costs
2. Crosby's model: Cost of conformance+ Cost of non-conformance
3. Opportunity or intangible cost models: [Prevention costs+ Appraisal costs + Failure costs + Opportunity costs] / [Cost of conformance+ Cost of non-conformance+ Opportunity costs] / [Tangibles + intangibles] / [P-A-F (failure costs includes opportunity costs)]
4. Process cost models: Cost of conformance + Cost of non-conformance

### 2.2. Cost of Quality categories

The cost of quality can be separated into three categories , namely:

- the cost of conformance to customer requirements;
- the cost of non-conformance to customer requirements;
- basic operational costs.

Defining each element in turn, the cost of conformance is the cost an organization incurs in meeting the requirements of its customer. A strong element of this cost is the money a company spends on preventing products or services going wrong or checking that they are right before they reach the customer. The costs of non-conformance are failure costs , the costs incurred by a company in repairing what has gone wrong. The third category basic operational costs are the costs an organization cannot avoid encountering during the normal performance of its business. Those categories are represented in Figure 2.



**Figure 2:** Cost of quality categories

### 2.3. Cost of Poor Quality and Cost of Good Quality

There are two main elements to focus on : the Cost of Good Quality (CoGQ) and the Cost of Poor Quality (CoPQ). The CoGQ relates to costs incurred to assure the quality of products and prevent poor quality. The CoGQ should be viewed as an investment in reducing the CoPQ, whereas the CoPQ can be viewed as a direct measurement of the failure costs incurred in producing a product. Together, these two variables make up the cost of quality.

$$\text{CoQ} = \text{CoGQ} + \text{CoPQ}$$

The CoPQ measures internal and external failure costs and the CoGQ measures appraisal and prevention costs.

The CoPQ quantifies traditional quality costs companies measure and includes rework, returned materials, scrap, and originate both internally and externally. Hence, the CoPQ variable is divided into two sub-variables: Internal Failure Costs (IFC) and External Failure Costs (EFC).

$$\text{CoPQ} = \text{IFC} + \text{EFC}$$

On the other end of the spectrum, the Cost of Good Quality (CoGQ) measures costs related to areas such as people and technology involved in the production of high quality products.

These costs are much less likely to be accounted for by executives and plant managers in respect to the cost of quality equation. They are often measured disparately rather than in a standardized way that can facilitate enterprise-wide comparison. The CoGQ has two central components: Appraisal Costs (AC) and Prevention Costs (PC).

$$\text{CoGQ} = \text{AC} + \text{PC}$$

### 2.3. The Taguchi Quality Loss Function (QLF) and the Hidden Costs of quality

Taguchi Methods was developed by Dr Genichi Taguchi. It combined engineering and statistical methods that achieve rapid improvements in cost and quality by optimizing product design and manufacturing processes. There are three statements that apply for the methods:

- we cannot reduce cost without affecting quality;
- we can improve quality without increasing cost;

- we can reduce cost by reducing variation or by improving quality. Therefore, when we do so, performance and quality will automatically improve.

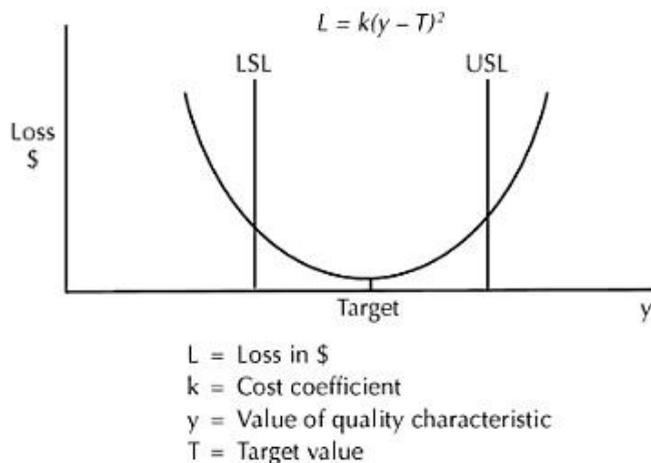
Taguchi defined quality as “the loss imparted to society from the time the product is shipped.” Fundamental to this approach to quality engineering is this concept of loss. He associated loss with every product that meets the customer’s hand. This loss include, among other things , consumer dissatisfaction, added warranty costs to the producer, and loss due to a company’s bad reputation , which leads to eventual loss of market share.

Quality costs or poor quality costs are usually quantified in terms of scrap and rework, warranty, or other tangible costs.

What about the hidden costs or long-term losses related to engineering, management time, inventory, customer dissatisfaction, and lost market share? Can we quantify these? Perhaps, but not accurately. Indeed we must find a way to approximate these hidden and long-term losses, because they are the largest contributors to total quality loss. Taguchi Methods uses the Quality Loss Function (QLF) for this purpose. QLF depends on the type of quality characteristic involved like:

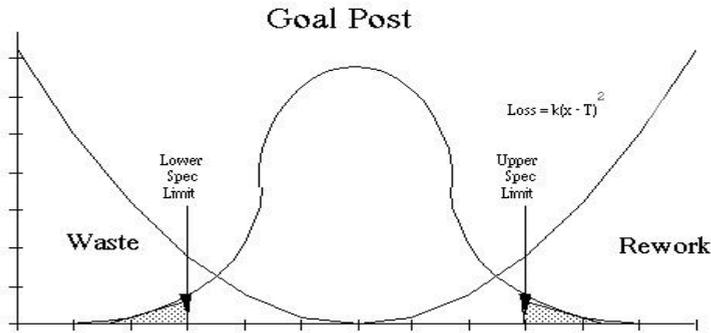
- Nominal-the-best (achieving a desired target value with minima variation: dimension and output voltage)
- Smaller-the-better (minimizing a response: shrinkage and wear)
- Larger-the-better (maximizing a response: pull-off force and tensile strength)
- Attribute (classifying and/or counting data: appearance)
- Dynamic (response varies depending on input: speed of a fan drive should vary depending on the engine temperature)

Loss can occur not only when a product is outside the specifications, but also when a product falls with specifications. Further, it is reasonable to believe that loss continually increases as a product deviates further from the target value, as the parabola (QLF) as shown in Figure 3.



**Figure 3:** The Taguchi Quality Loss Function (QLF)

The loss isn't linear. Taguchi theorized that the loss is proportional to the square of the distance from the target value.



### 3. Research methodology

We present the modeling approach used to define customer waiting time improvement model for evaluating service quality.

By using the Taguchi Loss Function, we can determine the cost of quality caused by customer dissatisfaction from waiting in queue. In this research, the model combines the

Taguchi loss function with the components of waiting time and customer dissatisfaction.

The model is derived for a single channel single server for M/M/1, Ek/M/1 and M/G/1 queuing model. We assume the queuing line has single channel single server and customers are selected from the line in a first come, first served fashion.

Waiting time from each queuing model is defined by its probability density function. The function is combined with Taguchi Loss Function to define quality loss of customer waiting and learning curve.

The Taguchi loss function for customer waiting time can be expressed in (1) which taken from Fink and Gillett (2006).

$$QC = \int_0^{\infty} f(t)Kt^2 dt \quad (1)$$

Where

$f(t)$  = probability density function of customer waiting

$K$  = penalty cost per unit time waiting

$t$  = time

In above equation, the value of  $K$  represents the cost of customers to wait in queue.

By direct integration of (1), expressions for the Taguchi loss of customer waiting time for M/M/1, Ek/M/1 and M/G/1 queuing model can be obtained. The Taguchi cost for M/M/1 queuing model (Fink and Gillett, 2006) is expressed in (2).

$$QC = \int_0^{\infty} \lambda(1 - \rho)e^{-\mu(1-\rho)t} Kt^2 dt(2)$$

In the equation,  $\rho$  denotes the utilization which can be expressed by (3).

$$\rho = \frac{\lambda}{\mu}$$

where  $\lambda$  and  $\mu$  denote arrival and service rate respectively.

A numerical example is given to illustrate the implementation of the model. We assume the time horizon is  $t= 2$ , the arrival rate is  $\lambda= 12$  customer/hour, the service rate  $\mu$  is 16 customer/ hour. Hence, the server utilization is  $\rho= 0.75$ . The model will find the least total cost. Let  $t$  equal to the time horizon for a continuous improvement program to reduce customer waiting time.

#### 4. Findings and discussions

We investigate customers waiting time improvement using Taguchi Loss Function. The cost incurred in this research includes quality loss. The decision variable of this research is learning rate which describe the level of learning that must be performed by a company to improve their service quality in term of waiting time.

#### 5. Conclusions

In recent years organizations have been focusing much attention on quality management. Also, manufacturing environments have changed enormously so today's consumers are becoming more and more complex and they require high quality and diversified products. Therefore, companies should produced new, innovative and high quality, yet cheap products that today's customers want to buy. To maximize the profits of an organization it is necessary to monitor quality costs. Quality costs are important considerations for information management and information technology. In global world, the most important way to survive in the competitive environment for firms is using quality as a core strategy. All successful companies have a strong quality strategy in order to survive in the competitive world. Now, many successful companies promote quality as the central customer value and consider it to be a critical success factor for achieving competitiveness. The successes of multinational corporation depend on their successes in using quality cost systems

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## APPLYING THE EFQM EXCELLENCE MODEL AT THE GERMAN STUDY LINE WITH FOCUS ON THE CRITERION "CUSTOMER RESULTS"

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**Abstract:** *This article presents a stage of the implementation process of the EFQM Model in a higher education institution, namely at the German study line within the Faculty of Economics and Business Administration, “Babeş - Bolyai” University, Cluj–Napoca. Actually, designing this model for the higher education sector means highlighting the basis for the implementation of a Total Quality Management model, seen as a holistic dimension for the perception of quality in an organization. By means of the EFQM method, the authors try to identify the performance degree of the criterion „Customer Results”, related to the students’ satisfaction level. The students are seen as primary customers of the higher education sector and have an essential role in defining the quality dimensions. On the one hand, the customers of the higher education sector can surface the status quo of the quality in the institution and on the other hand they can improve the quality. Actually, the continuous improvement of quality is highly linked to performance. From this point of view, the European Foundation for Quality Management model is a practical tool in order to support the analysis of the opportunities within higher education institutions. Therefore, this model offers a customer focused approach, because many higher education institutions consider the students to be the heart of teaching and researching. Further, the fundamental concepts are defined and the focus is pointed in the direction of customer approach, which highlight the idea that excellence is creating added value for customers. Anticipating and identifying the current and the future needs of the students by developing a balanced range of relevant dimensions and indicators means taking an appropriate action based on the holistic view of quality in an organization. Focusing and understanding students’ and other customers’ requirements, their needs and expectations, follows the idea that performance can be achieved by involving people in the continuous development of the process, they work in.*

**Keywords:** *EFQM Model, Higher Education Sector, Performance Degree, Customer Satisfaction, Customer Results, Excellence.*

**JEL classification:** *I23.*

## 1. Introduction

The higher education sector is perceived as a centre of opportunities and the global change requires a continuous improvement of teaching, learning and research. For this reason, it is vital to develop an excellence model in order to identify the status quo of the quality dimensions within a certain institution, but also to deduct viable strategies for its future development.

According to ENQA Report (2005) the higher education institutions should have policies and procedures to quality assurance in order to achieve performance. In the same time, the higher education institutions should also commit themselves to the development of a culture, which provides and recognises the importance of quality and implements strategies for the continuous enhancement of quality.

Further, the ENQA Report suggests, that it is not sufficient to define these developments in terms of new trends in higher education, since there are relevant factors that contribute to this. Facing the pressure from a range of stakeholders, the higher education sector is linked with the challenge of reorienting its approaches to more customer focused activities (Hides, Danes and Jackson, 2004).

Moreover, the Sheffield Hallam University Report (2003) highlights that the European Foundation for Quality Management has been tested and applied within higher education by using the customer – focused approach. This situation is congruent with the objectives of many education institutions, which put the students in the centre of learning and teaching.

Sallis (2005) admits that education is defined as a provider of services and concerning this matter, the customers are a very diverse group. Because quality means meeting the customers' needs, it is important to be clear whose needs should be satisfied. The author makes a distinction between:

- primary customers: who directly receive the service;
- secondary customers: such as government, employers or parents;
- tertiary customers: who have a less direct, but crucial stakeholding in education;
- internal customers: employees of the institution.

By using this structure, the primary customers are seen in this paper as paramount, namely the students.

Actually, the performance of an institution depends on its capacity to ensure the resources in order to achieve the main objective, which refers to the providing of knowledge and skills embodied in people and technologies. The value of this knowledge is defined by the customers of the institution in term of quality, relevance and utility (Spaapen et al. 2007; Marginson 2007, Benneworth & Jongbloed, 2010).

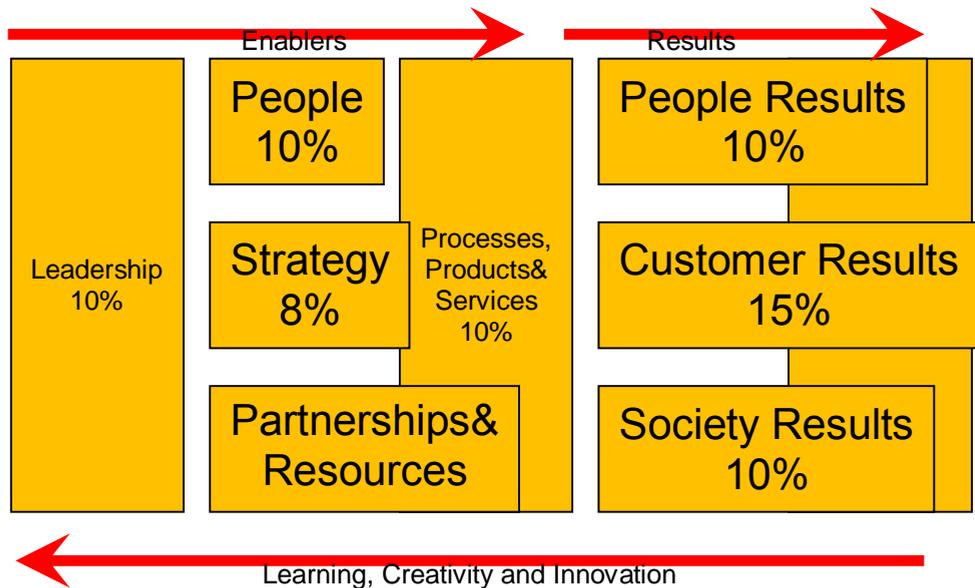
## 2. Objective

This paper aims to present the methodology and the importance of implementing the European Foundation for Quality Management model in the higher education sector, because regardless the culture, size or tradition the higher education needs to develop excellence in order to be successful.

### The EFQM Excellence Model

The „European Foundation for Quality Management (EFQM)“, founded 1988, resulted as part of an initiative assumed by managers of large European companies,

offering a possibility in adopting a Total Quality Management Model. (The European Foundation for Quality Management, Introducing excellence, 2009) Within this paper we will focus on the current used version of the model, namely the 2010 version. Figure 1 represents the graphic structure of this model.



**Figure 1:** The new weighting of criteria within the EFQM model, version 2010

Source: Introducing the EFQM Excellence Model 2010,

[http://www.efqm.org/en/PdfResources/EFQMModel\\_Presentation.pdf](http://www.efqm.org/en/PdfResources/EFQMModel_Presentation.pdf), p.21 and p.42

Five of the criteria are grouped within the category „Enablers”, and four of them are grouped within the category „Results”. Therefore, the category „Enablers” contains all efforts taken by the organization and necessary resources in order to achieve excellent results, and integrating the feed-back contained within the category „Results”, the organization may improve its enablers.

The criteria of the „Enablers” category would be (The European Foundation for Quality Management, Introducing excellence, 2009 and Introducing the EFQM Excellence Model 2010):

- Leadership: Referring to leader’s behaviour, manner of initiating, implementing and communicating change within the organization. Assuring good relationships to external partners, clients and suppliers would also be leader’s responsibilities;
- Strategy: The vision of the organization and the goals deriving from that vision ground on the future needs and expectations of the stakeholders, meaning that latter should be inserted into the strategy;
- People: Orientation towards human resources refers to the capability of the organization in using employees’ competencies in order to continuously improve the performances of the organization. Therefore, the evaluation within this criteria focuses on the way the organization plans its resources, the way the organization plans the needs regarding competences and abilities and the way the employees are involved in achieving the goals of the organization;

- Partnerships and resources: Issues addressed within this topic rely on the way partnerships and resources are used and managed so as to sustain the policy of the organization. The term „resources“ is used to gather both financial, material, technological, informational and other sorts of resources the organization uses. Therefore, this criterion deals with the way an organization establishes relationships with partners (suppliers, clients, sponsors, etc.)
- Processes, Products and Services: Addresses the design and management of processes. Measures that facilitate continuous improvement, creativity and innovation are greatly encouraged.

The criteria corresponding to the category „Results“ are (The European Foundation for Quality Management, Introducing excellence, 2009 and Introducing the EFQM Excellence Model 2010):

- Customer results: Has a greater weight within the model, compared to other criteria, because it is thought to be the best instrument in achieving the goals of the organization. Issues addressed within this topic deal with the initiatives taken in order to satisfy both internal and external clients. Also, it has to be clearly stated which kinds of measures are currently taken by the organization so as to determine and measure clients' satisfaction. In this respect, the organization should take into account new indicators in order to measure clients' satisfaction.
- People results: This criterion focuses on establishing the performance of the organization from employers' perspective, but also to evaluate organizations' results through the involvement of employees. Therefore, motivation and satisfaction are important issues.
- Society results: Within this criterion, public opinion is of great value. Self-assessment of the organization should underline if it is able to satisfy the needs of the society: responsibility towards the environment, quality of life, involvement in different social activities, etc.
- Key Results: The main goal is to maintain and improve the results of the organization. Hence, this criterion deals with organization's achievements in relation to their planned performance. Therefore, one can easily identify the link between the criterion "Processes, Products & Services and Key Results, because latter offers information about past data and "Processes, Products and Services" about the future, meaning that the success of an organization is only partially covered by Key Results, hence the source of improvements lies in the criterion "Processes, Products and Services".

Taking into account the goal of this paper, an important aspect is to be noted within this revised version of the model, namely the proposal in measuring the achievement of the criteria "Customer Results". As mentioned within (Introducing the EFQM Excellence Model 2010), the assessors should pay attention both to customer perceptions and performance indicators. According to prior cited publication, first issue to be measured, perception, could be measured using customer surveys, focus groups, customer complaints, generally direct contact to the customer. Second issue, performance indicators, focuses on external recognition, delivery of products and services, assessing the efficiency and effectiveness of an organization (Introducing the EFQM Excellence Model 2010). Presented in the Sheffield Hallam University Report (2003) the benefits of the implementation of an EFQM Model are:

- the model offers a holistic approach of the quality in the organization;
- the approach can be adapted to suit to all the requirements of the

- organization;
- the model is designed to suit to individual organizations;
- the method offers a way in which a common focus can provide a new way of working in the organization;
- it also provides a balanced set of results indicators;
- it has been tested in a range of sectors;
- it provides a framework through the kernel of a certain organizations' issues can be surfaced and improved.

It is also to be noted, that the academic culture plays an important role when implementing an EFQM model in the higher education institutions. Galler and Ghobadian (2004) state, that the successful adoption and practice of Quality Management requires probably modification to organizational culture. Davies (2007) admits that there is support for carrying out the cultural assessment before implementing a quality management model in order to identify potential barriers and help in designing the implementation program.

This article illustrates the results of the performance degree of the customer satisfaction; this dimension being integrated in the results section. Mainly, the section "customer results" is structured in the sub criterion customer perception and internal indicators. This research illustrates the results obtained by analyzing the Bachelor students' perception regarding the quality of the educational services at the German study line.

### 3. Methodology

The paper seeks to explore the performance degree of the criterion "customer results". The research question which emerged from the above literature review is, Which is the performance degree of the criterion "customer results?". In order to get a variety of perspectives, the authors designed a questionnaire with 27 items that focus on quality dimensions regarding the students' satisfaction. The first section is focused in the direction of teaching and learning process, the second section in the direction infrastructure and the last section reveals the dimension "opportunities and service provided". We also ask the survey respondents to give suggestions for improvement for the above mentioned dimensions. The questionnaire was given to the Bachelor students at the German study line at the Faculty of Economics and Business Administration and a response rate of 72% was registered.

For this study, the authors used as statistical method the mean in order to identify the students' degree of satisfaction for the provided educational service (Table 1).

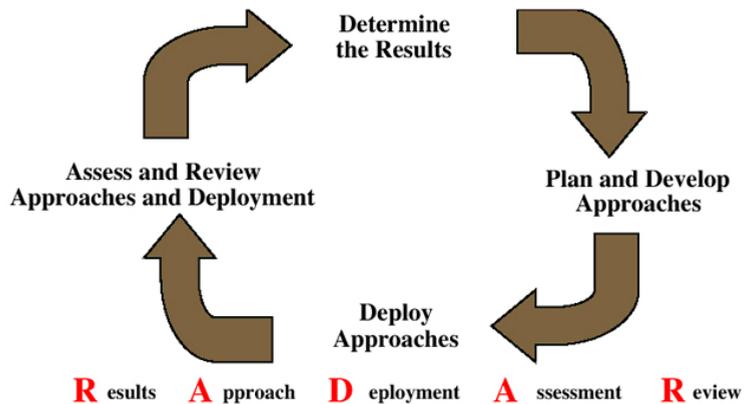
**Table 1:** Mean Values for the Bachelor students

Teaching and Learning Processes		Mean
1.	The curriculum of the specializations at the German study line presented on the web site of the faculty is useful and easy accessible	3.3210
2.	The knowledge gained within classes represent a good mix of theory and practice	3.0988
3.	The information about the elective courses are helpful, complete and available on time	3.2840
4.	The inclusion of both domestic and foreign teachers provide a successful mix of knowledge and skills	3.7099

5.	The teachers are available during tutorials whatever questions you may have	3.9753
6.	I also take the opportunity in visiting the teachers during the office hours within a semester	3.1790
7.	The tutors of all the specializations ensure adequate support during the academic year	3.3457
8.	During classes, soft-skills are also required (teamwork, communication skills, practical skills, etc.)	3.2531
9.	The presence at the course is a prerequisite for the acquisition of the specialized knowledge	3.2963
10.	A reasonable timetable contains 2-3 units daily	3.3951
11.	The knowledge acquired within all subjects in one semester are accessible, complete and appropriate	3.2222
12.	The language level at the courses meets my expectations	3.4568
13.	The difficulty of the taught material and the learning effort for the exam preparation are in balance	3.2963
14.	The rating system should be composed of several units (exam, homework, projects, attendance, etc.)	3.6235
15.	The final results of the tests are subject to the principle of fairness	3.5309
16.	The chances and opportunities to find a job as a graduate of the German study line provide a comparative advantage over other graduates	3.9630
Infrastructure		
17.	The premises have appropriate equipment (number of seats, heating, acoustics)	3.6049
18.	The technical equipment to carry out educational activities is in line with the expectations	3.7716
19.	I visit the "Robert-Bosch" library of the German study line at the during the semester and am aware of the current books fund	2.5185
20.	I am aware of the economic books fund at the Austrian library, the library of the German Cultural Centre and the German Institute	2.5926
Opportunities and Services provided		
21.	I am satisfied with the administration service ( secretary)	3.1296
22.	The referee at the German study line informs me fully and on time about all organizational news and events on course	3.4630
23.	There is a reasonable amount of information about scholarships and internship opportunities	3.4877
24.	The opportunities for the recognition of professional services with the scope of awards (Rehau, EBS, etc.) are meaningful	3.3889
25.	The representative of the students of the German Study Line within the Council of the Faculty is known to me	2.9630
26.	I am fully aware of his duties. I also feel that my sphere of interest are well represented	2.9259
27.	The existing student organizations act to strengthen the intercultural competencies. I am therefore ready to participate actively in such an organization.	3.1974

#### 4. Results

Further, in order to apply the EFQM Model at the German study line, the statistical values from the above table were integrated in the RADAR model. Supported by the Radar logic (Figure 2) the organization can systematically set goals (Results), develop actions ( Approach) in order to achieve these goals, implement a plan for these actions (Deployment) and finally analyse the action plan and its implementation ( Assessment and Review) (McCarthy, Gratbanks and Yang, 2002).



**Figure 2:** RADAR matrix cycle for the methodology of EFQM Excellence Model  
Source: adapted after McCarthy, Gratbanks and Yang (2002)

According to Sohovic, Pavletic and Kern Pipan (2010) the tool of RADAR Matrix is used for the assesment of organizational performance and applied within the EFQM Excellence Model. The matrix is structured in five columns, each of the column being responsible for the achievement of a certain degree of performance, namely between 0 % and 100 % for each subcriteria of the criterion „ customer results”. In this case, there exist 27 subcriteria afferent to each question regarding the degree of students’ satisfaction. The authors took into consideration the following structure (Table 2) for the implementation of the RADAR logic in accordance with the mean values.

**Table 2:** Correlation between performance degree and satisfaction level according to mean values

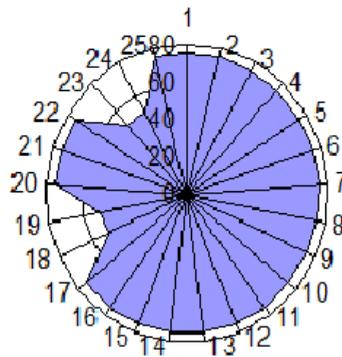
Performance Degree	0%	25%	50%	75%	100%
<b>Satisfaction Level (Likert –Skale): Mean Values</b>	<b>1-1,5</b>	<b>1,5-2</b>	<b>2-3</b>	<b>3-4</b>	<b>4-5</b>

Moreover, the RADAR matrix for the above mentioned results are illustrated in Table 3.

**Table 3:** RADAR Matrix for the performance degree of the Bachelor students' satisfaction

Performance Degree	0%	25%	50%	75%	100%
Satisfaction Level (Likert –Skale): Mean Values	1- 1,5	1,5-2	2-3	3-4	4-5
Number of reviews	0	0	4	23	0
Values	0	0	200 (4x50)	1725 (23x75)	0
Sum	200+1725=1925				
Performance Degree	1925: 27 = 71, 3%				

Further, Figure 3 illustrates the RADAR diagram, which reveals that the performance degree of the criterion „customer results” is 71, 3%.



**Figure 3:** RADAR Diagram for the performance degree of the Bachelor students' satisfaction

## 5. Conclusions

The performed research proposed the implementation of the EFQM model and explored the continuous improvement in the educational services. By implementing the model, a performance degree of 71, 3% was registered for the criterion “customer results”. This result illustrates actually the satisfaction level of the students, regarding the quality at the German study line. There are undoubtedly factors, that lead to an increasing satisfaction level, namely the chances and opportunities to find a job as a graduate of the German specializations and the inclusion of both domestic and foreign teachers in order to provide a successful mix of knowledge and skills. The dimensions scored with 50 % performance degree are related to the mediated information about the German libraries and about the duties, that the students' representative have in the Faculty Council. According to the performance degree, one could say that the organizational philosophy supports the quality within the educational processes.

A framework for the implementation of the EFQM model is proposed and a guideline is provided in order to calculate the performance degree of the sub criteria “students' perception”. This paper concludes that the successful implementation of a EFQM model is the starting point in designing a total quality management in the higher

education sector. According to Venkatraman (2007) the developing of quality management systems determine the organisations to be aware of the customer needs in order to react immediately to their needs and in the same time to use the students' feedback for making improvements in a systematic and continuous way.

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## ASPECTS REGARDING THE ROLE OF INFORMATION TECHNOLOGIES IN THE ASSURANCE OF SUPPLY CHAIN MANAGEMENT PERFORMANCE

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**Abstract:** *This paper is intended to outline the importance of e-logistics programs, based on the new information technologies and successful e-business applications in the case of Romanian companies that activate in the production and services field, namely producers, suppliers or distributors. The redesigning of the logistic system and the reconfiguration of the supply chain management (SCM) challenge the firms, especially the small ones, to explore new e-business applications, on the basis of feasibility studies before getting implemented. For a long time, firms considered that commercial changes are the last solution to resolve SCM problems, however many supply chains have been a failure. The explanation resides in the fact that a number of companies that had integrated their supply chains noticed that there was little or no response to the existing requests in this field. Although commercial changes represent an important part of Business to Business programs, actually very few managers understand the way to deal with them, which is integrating them in e-business programs. This paper outlines the companies' need to develop e-business programs and the importance of these programs for the whole supply chain to obtain performances, taking into account that many firms that get integrated in the supply chain lack the technological capacity to implement electronic means for processing, transmitting and receiving data. One remedy might be their initiative to use Business to Business programs, with the purpose to offer easily configurable optimized networks and interactive solutions based on Web, at competitive prices. This system should have different assisting functions to help the partners of a supply chain, especially the small firms, to easily integrate up-to-date management and informational system refinement methods, in an efficient and effective way. As it has been pointed out in the paper, a major role for the enhancement of SCM performances is information technology such as Internet and ERP systems. Internet offers important opportunities to all partners from the supply chain to get information about consumption tendencies and changes in consumption request, virtual information about a product and the clients' requests regarding the logistic services. As for ERP systems, it can be said that they mostly influence the designing of business processes, in order to assure coherence between them and the effective integration of different firm components. Even though the internal integration is an important aspect, an approach to management at the supply chain level, in an efficient and effective way, cannot be done without external integration with suppliers and clients. That is why we consider that companies belonging to the business field must focus on structuring key processes, to collaborate with their clients and*

*suppliers and to integrate their internal systems, with the aim to support business operations.*

**Keywords:** logistic management, supply chain, supply chain management (SCM), e-logistics, ERP(Entrepreneurial Resource Planning) systems

**JEL classification:** M21

## **1. Introduction**

Firm competitiveness in the market is more and more contingent on the attempts to enhance supply chain management competitiveness. This is to be achieved by means of improving the integration level with providers and clients, taking into account the influence of raw material prices, materials and other aspects regarding the production costs on one hand, and the clients' requests dynamics of change on the other hand.

Firm management is more and more concerned to identify logistic problems, such as: keeping supply chain and logistic network control, obtaining and processing information from suppliers, sending them out to other departments and finding out ways to deal with them on the basis of analysis and options emerged from new situations and opportunities (i.e. stocks expiry date, changes in transportation technologies and ware handling, freight and reorientation of cargo, when necessary). Equally, the firm must be prepared for taking into account the threats that may come out (i.e. new technologies in the informational flux, new e-business applications, e-logistics) in the view of assuring the background for effectively and efficiently putting into practice the strategies and the logistic programs.

An important factor that has a major role for the enhancement of SCM performances is information technology (Internet, ERP systems). Internet offers important opportunities for suppliers to get information about consumption tendencies and changes in consumption request, while ERP systems enable a blending of managerial practices with information technology. By means of this blending, the business processes of a company get integrated into the informational system of the entire supply chain, aiming to meet some specific logistic objectives. It offers to the clients a new channel to obtain virtual information about a product and even to purchase. All these aspects influence the producers to become more sensitive towards their clients, by anticipating their needs and requests. (Ghiani, G., Laporte, G., Musmanno; 2004)

A major role in enhancing SCM performances is the employing of new information technology, more exactly the development of a management based on electronic solutions and appropriate organizational change, which allows the use of the most effective and efficient e-business applications and e-logistics.

In order to be sure that the clients are in control, a completely appropriate new set of management practices and tools must be put into practice. The initiatives in the field of e-business application development firms, in general, and e-logistics in particular, attempt to align functional processes of SCM with information technology, aiming to improve its effectiveness, efficiency and performances.

Redesigning the logistic system and reconfiguring SCM represent for the firms a challenge to explore, acquire and implement new e-business applications, on the basis of feasibility studies that are to be conducted before being implemented. For a

long time, firms considered that commercial changes are the last solution to resolve SCM problems, however many supply chains have been a failure. The explanation resides in the fact that a number of firms that had integrated their supply chains noticed that there was little or no response to the existing requests in this field. (Murphy,P.R., Wood, D.F., 2004)

## **2. Need and opportunity of using information technologies with SCM**

Although commercial changes represent an important part of Business to Business programs, actually very few managers understand the way to deal with them, which is integrating them in e-business programs. Despite the fact that e-business programs development is crucial, we have to point out that a lot of firms that get integrated into the supply chain, especially the small ones lack the technological capacity to implement electronic means of data processing, transmission and reception. One remedy might be their initiative to use Business to Business programs, with the purpose to offer easily configurable optimized networks and interactive solutions based on Web, at competitive prices. This system would have different assisting functions to help the partners of a supply chain, especially the small firms, to easily integrate up-to-date management and informational system refinement methods, in an efficient and effective way. A global logistic strategy and a strategy to use common tools for the logistic operations, activities and processes must be developed, taking into consideration the client and market typology. Companies must have at their disposal the necessary capacity to deliver products to clients in short and exact time and to reliably complete an order-to-delivery cycle. Therefore, firms must be willing to significantly transform their processes, business activities and IT system, their internal processes of SCM, even if this measure takes great investment efforts for changing the uncompetitive systems with systems based on new information technology.

Another concern for the improvement of SCM, using the help of e-business, is related to the producers' interest to assure an effective and efficient control of production and logistics, that outlines the importance of activities optimization and logistic processes. The effective control of production and logistics will improve the relationship with the suppliers and the clients, who, at their turn, will be in control of the logistic operations they perform. This is easy to achieve for the direct distributors and suppliers (level 1), but as one moves backwardly among the different levels of a supply chain, where materials and other components are delivered for the subassemblies producers, the stock level can increase significantly because of the incapacity of partners belonging to the same supply chain to correctly identify the request. The stock-out, considered as a "break" between request and offer, is to be assured by means of components, subassemblies and raw material availability, which is based on reliable information in real time. This can often cause last moment changes in the manufacturing programs and it consequentially amplifies the variability factor from inside the system. At the other end of the SCM, the distributors/retailers make up their sizeable stocks, in order to deal with the clients' request (Bowersox,D.J.,Closs,D.J.,Cooper,M.B,2002). There are moments when changes in manufacturing program bring about stock-outs at the distributors level (distribution chain). The suppliers react slower as they need longer terms to deliver a requested component therefore they increase the period of time needed for the order-to-delivery cycle, which, as a consequence, determines a stock growth. The

same risk of a stock growth is caused by the possibility that they undergo obsolescence, which generates additional costs to the system, but some clients are not willing to wait when dealing with a stock-out and they will choose competitors' products.

Firm management has to take into account that assuring the product availability, as an aspect of the service they offer, will contribute to clients' satisfaction, and therefore it will build consumers' loyalty, being a fact that considering a service competitive standard, for the most part, the costs to regain a client are up to 2-5 times higher than to retain a client. Therefore, the use of Internet and ERP systems facilitates the implementation of logistic and production control improvement actions, by means of transmitting information in real time. (Ballou, R.H, 2004).

Another action concerning SCM efficiency and effectiveness is related to the building up of a value generating system, which implies large changes in the organizational culture, inside each function and each firm belonging to the supply chain, starting with raw material suppliers and ending up with the final clients. The increase of the capacity to immediate reaction to the new final client requests must be an important goal, and this can come into being by means of interconnecting clients, distributors, producers and suppliers over Internet. This will allow logistics and production control improvement, and the suppliers will represent an important segment of this process. Information regarding request and offer must assure good visibility for partners with the use of logistics functions. For example, suppliers' communication site, also known as "*supply power*", will provide important information to: designing, supply, production control, internal logistic operations, production, external logistic operations, sales and services. This will enhance the client service level, by shortening the delivery deadlines and order-to-delivery cycle. SCM reconfiguration is facilitated, in a collaborative approach, by the assurance of good visibility of clients' requests during the whole supply chain. ( Ballou, R.H, 2004)

All these critical change factors in the field of logistics should be well assessed and taken into consideration as important opportunities in the view of the shift of industrial Romanian enterprises from traditional organizational model to a value generating integrated system that reacts to international and national market conditions, changing technologies and clients requests, which implies SCM redesigning. To solve these problems, an infrastructure must be created, that enables the use of the tools offered by the new information technologies, the assurance of the building up of a value generating integrated system and the optimizing the coordination of functions for partner firms in the supply chain, on the basis of a functional strategy aligned to the purpose of maximization of value offered to client.

Romanian enterprises, suppliers, producers and distributors have to act in the following directions, in order to compete with the fore mentioned changes and to successfully implement the new information technologies:

- putting forward professional development programs for managers to finely understand the system and particularities of SCM, to adopt e-business, e-logistics, SCM models and programs, with the purpose to get solutions to the really important problems that refer to large and non-functional procurement center, to freight networks and fragmented logistics, to tensioned client/supplier relationship, to communicational barriers;
- developing alignment and collaboration not only with first level clients and suppliers, but with the entire dimension and structure of SCM (level 2 and 3

clients and suppliers), in order to create a value generating integrated system. Currently, Romanian industrial enterprises possessing functional logistic systems have direct relations only with strategic clients and suppliers, which decreasing SCM efficiency and effectiveness. Managerial decisions within SCM must be based on performance assessment criteria, which are well defined for all participants (suppliers, producers, distributors, clients), in terms of quality, delivery deadlines, technology, without neglecting the financial impact upon the entire logistic chain. Key processes must be coordinated by inter-functional teams that should include: designers, engineers, marketing specialists, logistics specialists, etc., with the aim to determine client services standards; ( Handfield, R.B., Nichols, E.L).

- advocating some collaborative forms in the product designing, processes and services field, by developing informational systems, in the view of suppliers and clients active involvement in the optimization of activities and logistic processes; (Donath, B, 2002)
- long and continuous partners' performance improvement, their integration in the supply chain, by point of contact identification within the chain;
- assuring employees professional competences in the field of e-business applications and programs, by the means of a rigorous selective process and continuous development of these competences, starting with top management and continuing to the bottom of the managerial pyramid;
- implementing an integrated strategy for a SCM administration, based on the most appropriate e-business programs, aiming to improve collaborative planning and to maximize internal and external performances of the logistic chain.

The effectiveness of degree of internal integration activities and of logistic processes, as well as the extent to which they are externalized, depend on managers competences in the field of SCM and e-business applications, e-logistics and e-SCM, on company strategies, on partners within supply chain requests and standards and on intra-organizational and inter-organizational communicational development, facilitated by e-mail and Internet. (Stock, Lambert, 2001: p.587) Internet enables the practicing of outsourcing, as it assures visibility to logistic and manufacturing processes, offering to the firms the possibility to have a real control upon the supply chain even in situations when certain activities are entirely achieved outside the firm.

### **3. Use of Internet and ERP systems in supply chain management**

The main purpose of this paper is to identify the weaknesses and strengths of using Internet and ERP systems in supply chain management, exploiting in this sense the results of a study conducted by the authors, between 2010-2012, in 67 firms belonging to industrial production field (producers, suppliers, distributors) and to logistic services providers' field. The study was conducted on the basis of a complex logistic audit questioner and of 7 interviews with renowned professionals in the field of logistics, 3 managers and 4 specialists belonging to very performing companies in this field. We have to mention that we used a conducted sample, consisting of firms that have interests and achievements in logistics. A separate part of the questioner was dedicated to the problems rising in the development and enhancement of informational systems and logistic processes management, on the

basis of information technologies and e-business, e-logistics, e-SCM successful applications.

Our study conducted in the Romanian industrial milieu shows that, in order to enhance the logistic performances (limited stocks, quick and accurate delivery, low costs, high quality service, client service, etc.), many industrial firms (44,77%) are not prepared to integrate new digital technologies.

The large variability of request determines producers and distributors to use Internet, which is considered the most important Business to Business technology, and to create an informational line in the supply chain. This informational line enables rapid communication, rapid spread of ideas and concepts and facilitates innovation. The explosive growth of Internet makes the specialists affirm that there is no limit for the quantity of stocked and transmitted information over Internet, thus, a full collaboration of the logistic network being possible. (Ghiani, G., Laporte, G., Musmanno, R, 2004).

Firms can be successful on the Internet economy, by means of participation to the electronic business network, but it has been noticed that, in the case of many firms (35,82%), especially small end middle size, logistic management web sites are designed by non-experienced staff. The result is that the electronic business network implemented by these firms are lacking of consistency. Well-designed sites, created by logistic specialists, have a very important role in purchasing goods and services, offering the capacity to build up "one to one" networks, by means of assuring long-term relations that may accelerate electronic acquiring process. They also help to reinforce the favored client status assigned to some companies that buy great quantities of products. The study also shows that partner firms from the supply chain are preoccupied more with cost reduction (56,71%) than with accessing new successful applications in e-business, e-logistics and e-SCM field (20,89%).

Web offers the possibility to transmit information via e-mail, with a certain degree of message standardization. Economist Intelligence Unit and Meritas Consulting conducted a study which proves that 82 % of the senior managers from firms belonging to Fortune 500, that are in charge with supply chain, consider that Internet will crucially influence the supply chain performances. This proves that managing informational fluxes and logistic processes within the supply chain have taken a step to the digital era. (Donath, B, 2002 p. 758). A new trend has been observed in Business to Business commerce, buy means of firms integration in virtual logistics. There is an even larger number of electronic markets, an even larger number of Internet based supply chains that are meant to create communicational levels and dynamic interaction among participants. Access to virtual logistic networks can be realized using Wireless technologies (mobile phones, laptops, desktop units).

Another challenge for many Romanian firms belonging to industrial milieu and other fields consists of updating the technologies in use and older software, for a better exploiting of the opportunities offered by a modern Web based network. The study reveals that 32,83% of the enquired firms from the Romanian industry have encountered these problems. The cause for this resides in the fact that companies comprised in this segment don't have a coherent IT strategy, compatible with logistic management requirements and don't have very well trained staff. It is to be said that 71,64% of these firms have less than 250 employees, being small and medium sized companies. Taking into consideration that many Web sites allow the access of a large variety of information for free, this being not only an opportunity for Romanian

companies, but also a necessity, firms must adapt themselves to software standards compatible with the requirements of an effective and efficient supply chain.

As for the use of ERP systems, the study reveals that only 62,68% of Romanian industrial enterprises comprised in the sample use ERP systems, integrating production, logistics, stocks, transportation, orders and accounting. Many of the ERP systems applications are used for planning in advance, for system designing and delivery automation. For the most part of the enquired enterprises, ERP represents a back-office activity that does not directly involve clients. That is why front-office systems need to be implemented, to create interaction with clients and with e-Business, e-Commerce and SRM (Supplier Relationship Management). ERP system advantages refer to online visualization in real time of firms' activities and permanent monitoring of the most important business parameters, at the level of each enterprise and overall, for the entire supply chain. All these actions allow to easily identify the most important problems and opportunities, to ground decisions in real time and to efficiently control business in real time.

Except for the large size enquired enterprises, which represent 26,86% from the total amount of the enquired firms, the small and medium size enterprises managers declared that the acquisition of an ERP system is not a priority to them. There are manager who have purchased accounting-financial applications, improved them with some modules (human resources and material resources management), considering therefore that they own ERP systems, not taking into consideration the fact that these systems must comprise business management modules that assure the management of all organizational processes, such as accounting-financial processes, sales, delivery, acquisitions, logistic management, production management, human resources management, etc. The firms that don't implement ERP solutions lack in real time information, resorting only to accounting solutions, which causes difficulties in activity flux, time loss, human resources loss and lack of control over information. Therefore, there is no pertinent topic for firms and competitive supply chains without appropriate and competitive ERP.

Many production companies and distributors from the Romanian market lack well prepared staff, at the managerial level as well as at other levels comprising specialists in charge with executive functions, which leads them to opt for sophisticate ERP solutions, inappropriate to the type of business, or to the acquisition of cheap solutions that don't bring about profit. Because investments in ERP competitive systems are great, the enterprises that declare to have heavily invested for purchasing this kind of systems are to be found in the segment of large production and distribution companies.

The great providers for these systems, such as SAP and Oracle, which are well represented in Romania, help the companies to develop a system of integrated information management, that integrates not only organizational internal components, but clients and suppliers also, aiming to share data and information that will bring about important effects for the quality of decision in supply chain management. This ability of the system to get integrated represents a huge advantage for them, and even if they are at a high price, they offer to the users the possibility to reduce costs by means of efficiency and standardization of systems and procedures.

Despite the fact that there are many companies that have implemented ERP system, we can say that they focus especially on designing business processes, in order to

assure coherence between them and the effective integration among different parts of the company. Internal integration is one important aspect within supply chain management, but an approach to SCM cannot be done efficiently and effectively without external integration with suppliers and clients. In order to accomplish this, enterprises have to make efforts to structure their key processes, to collaborate with their clients and suppliers and to integrate their internal systems with the purpose to support business operations. (Rushton, A., Oxley, J., Croucher, P, 2004)

Specialists in the field have ascertained that there is a misunderstanding in ERP systems implementation, not only Romania, which started this process later, but also in countries that have notably achievements in this domain, such as USA. In this light, R.V. Delaney, executive vice-president at la Cass Information System (St. Louis), severely criticizes ERP systems, pointing out the fact that, in 40 years of logistic experience, there hasn't been ever so much confusion like it was when ERP systems were implemented. Even if ERP system implementation hasn't developed too much in the last 10 years, these sophisticated systems are not the only ones to be blamed, top managers engaging their part of responsibility. Many planning systems have been replaced by ERP systems, this change being undertaken without deeply knowing the business, so as it can offer an alternative support for planning to the logistics professionals. Despite this, Delaney admits that ERP systems providers have minimized obstacles regarding interface, by means of documentation and standardization, with the purpose to make these systems accessible to the supply chains. A significant obstruction in ERP systems is time of implementation (6-8 months) and the elapse of time in which they will display a positive impact over national productivity. (Donath, 2002: p.794)

#### **4. Conclusion**

The analysis of the logistic systems based on Internet and ERP urges us to affirm that a very important role for the success of these systems is represented by the degree of top management awareness and involvement. Top management is in charge with solving specific problems of these systems and with resorting to internal professionals and to consultancy, in the case of the small and medium firms that don't have at their disposal highly qualified staff in the field.

Of course, one could easily suggest implementation of technology, but it is more difficult to change organizational culture, in order to share these ideas both with external clients and with internal clients (the employees).

As there isn't such a thing like a culture of e-SCM in Romanian industrial enterprises, except for the top companies that represent 18.87% of the total amount of companies, one possible solution might be setting up a logistic council within the company, made up of logistic professionals and other professionals from the company, that should discuss with the managers about the impact of the new technologies, in order to understand the advantages and the extra value they bring about. If necessary, asking for outside firm consultancy is recommended, with the purpose of getting the managers and other employees aware of the advantages that result from the implementation of these solutions. Purchasing solutions based on information technologies within supply chain management will be a success if partners are informed about the last innovations in the field of IT tools and technologies, if human resources possess team work abilities and competences, if managers holistically understand the business culture. Regarding the acquisition of

ERP systems, the experience of the successful enterprises recommends solutions developed in Romania, that are adapted to the Romanian laws, with beneficial effects in implementation, that take less time and that are more effective. Of course, it is mandatory for the success of implementation that the software provider should have the *know-how* in this field and should assure professional support services.

Implementation of quality management system can assure proper ERP systems and Internet working, for highly qualitative services offered to clients. Assuring a service to clients at their level of demands and expectations asks not only for the assurance of the provided services quality and for long and medium term retention of loyal customers, but also for the ability to use the most appropriate e-business programs, the most effective systems and applications, e-logistics and e-SCM, with the aim to offer competitive advantage and higher profitability.

E-SCM is based on the certainty that competitiveness is unconceivable without logistic services development, without achieving comparable levels of effectiveness, efficiency and quality. For this, stress should be put on these aspects: product availability improvement, based on an efficient stock management and on market requests; coordination of production, distribution, stock levels and deliveries between the main loops (members or organizations) of the supply chain management, supported by integrated informational systems that provide sales in real time; programming and proceeding along information; setting up of alliances and strategic partnerships with clients, suppliers, stock administrators, with those in charge with the development of information technology and successful e-business and e-logistics applications; direct involvement of the client in defining the product and in specifying the requests regarding operation quality standards that make up physical fluxes of materials and products.

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# ANALYSIS OF THE IMPACT OF THE SUPPLY CHAIN PERFORMANCE ON THE OVERALL ORGANIZATIONAL PERFORMANCE

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**Abstract:** *One of the first questions which need to be addressed in empirical research on organizational performance is how to measure it. Different stakeholders might understand performance in their own terms so adequate measures of organizational performance have to balance different perspectives. Although financial measures of performance, in particular shareholders return, are recognized as most appropriate measures of firms' performance, the most employed measures of organizational performance are accounting indicators due to the availability of data. Drawing on existing empirical studies on organizational performance we have chosen to measure the organizational performance using one of the most prevalent accounting ratios – the return on sales (ROS). After presenting the multidimensionality of organizational performance and its specific in the context of a supply chain, this paper uses a Romanian dataset of firms to estimate the impact of different areas of performance in the context of a supply chain on the overall organizational performance. Analysis follows a balanced scorecards approach, identifying four areas of performances in the context of supply chains. Logistics costs and revenues measure the performance in a supply chain from a financial perspective. We have chosen customers' satisfaction, delivery dependability, speed and flexibility as the major coordinates of the marketing performance in the context of a supply chain. Standardization, simplification and structural adaptation define in our perspective the operational performance in the context of a supply chain and information management and internal communication accounts for the innovational performance, the last performance area defined by a balanced scorcard. Results show that financial, marketing and innovation do have a positive and statistically significant impact on the overall organizational performance. While all the estimated coefficients have the expected sign, not all the performance areas and metrics employed in the analysis are statistically significant. We appreciate that this research affords a better understanding of the performance areas that contribute to the increasing of organizational performance.*

**Keywords:** *supply chain management, supply chain performance*

**JEL classification:** *M10, C54*

## **1. Multidimensionality of organizational performance**

Richard, Devinney, Yip and Johnson (2009) wrote a comprehensive reviews of the empirical studies on organizational performance published between 2005 and 2007 in top 5 US management journals (Academy of Management Journal - AMJ, Administrative Science Quarterly – ASQ, Journal of International Business Studies – JIBS, Journal of Management – JOM and Strategic Management Journal - SMJ). The review shows that the most employed measures of organizational performance are accounting and financial indicators and ratios. The accounting measures have

been the traditional mainstay of proxies for organizational performance in empirical research (Roberts and Dowling, 2002). Their prevalence is attributable to a documented statistical relationship between accounting performance and organizational performance. Yet there is agreement in the management literature on performance that economic and not accounting performance reflects the true organizational performance. Financial measures of performance, in particular shareholders return, are recognized as most appropriate measures of firms' performance. That is because such measures better incorporate intangible assets that in the case of accounting measures. In addition accounting measures of firms' performance are limited by the fact that they reflect past performance and consequently using them for forecasting future performance is limited. Yet using financial indicators as proxies for performance has in its turn strong limitations. Relying on the assumption that shareholders are the sole beneficiary of firms' rents reduces the dimensionality of firms' performance. Then, as financial literature points out, market valuation reflects not present performance but expectations about future performance. In other words changes in market prices are determined by information and not by fundamentals. Under market efficiency hypothesis we have a random walk phenomenon. We cannot use past information to predict future performance. Momentum (Glenn, Pettengilla, Edwards and Schmitt, 2006) also contributes to the weak relationship between economic fundamentals and future organizational performance. Finally, financial indicators of firms' performance evaluate performance at organizational level as a whole, making impossible to disaggregate performance at product or strategic business unit's level due to synergies / cannibalization phenomena associated with interactions among units (Richard, Devinney, Yip and Johnson, 2009).

Mixed indicators (financial and accounting) are a third class of indicators used in measuring organizational performance. There is extensive literature on Economic Value Added (EVA). The key advantage of EVA is that this method accounts for the cost of capital, providing a better balance between risks and returns. Although considered a mixed indicator, EVA does targets solely the interests of shareholders. A better accounting for the multidimensionality of organizational performance is offered by the balanced scorecards. Most important BS is mapping not only financial performance and shareholders' outcomes but also marketing performance and innovation and consequently Balanced scorecards better account for the multidimensionality of firm's performance. Yet obviously employing Balanced Scorecards methodology to assess organizational performance is not appropriate in empirical estimation with one left hand side proxy variable for organizational performance. It follows that quantitative estimations of organizational performance cannot use balanced scorecards methodology – which is another reason for the prevalence of using accounting indicators as proxies for organizational performance.

## **2. Supply chain performance metrics**

Defining a performance metrics in a supply chain requires: (i) choosing the areas where we measure performance and (ii) choosing the most appropriate measures of performance (Constangioara, 2013).

Turning to the issue of defining a relevant conceptual framework of approaching the performance metrics in supply chain, to account for the multidimensionality of performance in supply chains, the literature on supply chains proposes three

approaches to defining performance metrics and sub-metrics: (a) balanced scorecards, (b) differentiating between strategic, operational and tactical levels of SCM and (c) considering more closely the four major supply chain activities / processes: plan, source, make/assemble and deliver. Gunasekaran, Patel and McGaughey (2003) in their proposed framework for supply chain performance's measurement even consider a combination of approaches (b) and (c).

Regarding the most appropriate supply chain performance measures, the existing supply chain literature agrees that in empirical studies, accounting and financial indicators such as ROI or price/earnings are most often employed in estimations of performance. Yet using solely accounting / financial indicators limits the dimensionality of performance in the context of a supply chain. These considerations are discussed in detail in the literature on organizational performance and briefly mentioned in what follows.

The literature on SCM extends the perspective of the literature on organizational performance towards supply chain context. All the considerations presented in the organizational performance literature are important in defining the areas where we measure performance and the most appropriate indicators that we choose to use.

### **3. Analysis of performance metrics in Romanian supply chains**

#### **3.1. Data**

For the analysis of performance metrics in SCM, I am using a Romanian sample of 100 firms which were subject to a supply chain survey in 2011. Respondents were asked to evaluate different areas of performances in the context of Romanian supply chains. The 100 mailed questionnaires returned 26 usable responses. The 26% response rate is similar to response rate reported in supply chain empirical studies. The working dataset comprises enterprises representative of the overall structure of Romanian economy. Most enterprises from the working dataset are from the manufacturing sector (11) followed by commerce (5) and other services (10). Final sample size is sufficient for adequate quantitative estimation.

#### **3.2. Methodology**

There are many empirical studies focusing on performance metrics in the context of a supply chain. The methodology proposed by them first checks for the dimensionality of the scales employed in the analysis, by means of a principal component analysis. The principal component is a mathematical procedure that uses an orthogonal transformation to convert a set of correlated variables into a set of values of uncorrelated variables called principal components. Thereby this analysis results in set independent principal components. However the assumption needed here is that the dataset is jointly normally distributed and results are very sensitive to relative scaling of original variables (Wagner and Neshat, 2012). For business analysis and management policies development, the principal component analysis is important because identifies how much each factor contributes to the total variability of data. After the preliminary analysis of the scales employed for collecting data, Gunasekaran, Patel and McGaughey (2003) propose an approach similar to Pareto analysis for analysing the performance metrics in the context of supply chains. They establish the importance of the performance measures used in the supply chain context by calculating the means of all responses and ranking them.

Ranks are then converted to relative percentages. Nevertheless, most of the empirical works use regression to estimate the partial effect of different performance measures on the overall performance.

Comparing the two, it is obvious that Gunasekaran, Patel and McGaughey (2003) approach is easier to interpret but lacks the statistical significance interpretation. The regression approach is grounded in quantitative methods employed in business but, although provides an ordering of factors, results are less intuitive than the relative percentages offered by the approach of Gunasekaran, Patel and McGaughey (2003).

For the purpose of my empirical research I propose using econometric estimation of impact of performance in the context of supply chain on the overall organizational performance. Furthermore, my analysis employs a balanced scorecards methodology for defining the performance areas in a supply chain context. Thus I had only four areas of performance. The variables used in the analysis and the corresponding area of supply chain performance are presented in table 1.

**Table 1:** Performance metrics used in the analysis

Variable	Label	Performance area
costs		Financial
Revenues		
Customers satisfaction		Marketing
Delivery dependability		
Delivery speed		
Delivery flexibility		
Standardization		Operations
Simplification		
Structural adaptation		
Information management		Innovation
Internal communication		

Table 1 show that we have employed two variables for measuring financial performance in the context of a supply chain (logistics costs and revenues), four variables to account for marketing performance ( customers satisfaction, delivery dependability, speed and flexibility), three for operational performance ( standardization, simplification and structural adaptation) and two for measuring the innovational performance ( information management and internal communication). The independent variables are all dichotomous, taking value one for improved performance and zero otherwise. The dependent variable is dichotomous, with value one corresponding to an increase in ROS over a two years period (2009 to 2010) and zero otherwise.

### 3.3. Results

SPSS statistical package was used for estimation purposes. Results are presented in table 2.

**Table 2:** Estimation results

Variable	Coefficient ( $\beta$ )	p-values
costs	0.21	<0.001
Revenues	0.06	0.08
Customers satisfaction	0.17	<0.001
Delivery dependability	0.15	<0.001
Delivery speed	0.19	<0.001
Delivery flexibility	0.17	<0.001
Standardization	0.04	0.065
Simplification	0.07	0.011
Structural adaptation	0.11	0.09
Information management	0.23	<0.001
Internal communication	0.15	0.24

Table 2 shows that all estimates have the expected sign. However not all of them are statistically significant. In particular indicators measuring marketing performance are all statistically significant, with p – values less than 0.001. This documents the important contribution that marketing performance in the context of a supply chains plays in achieving the overall organizational performance. We see that the odds of increased organizational performance are 21% higher for firms that have increased their delivery speed over the investigated period. In comparison the odds are lower for delivery flexibility (19%) and dependability (16%).

Financial performance also influences the overall organizational performance. We see that reducing costs over the investigated period has increased the odds of increasing organizational performance by 21%. Yet the contribution of sales to organizational performance is not statistically significant at p – values less the 5% (p=8%).

Operational performance contributes to organizational performance to a lesser degree. We see that none of the estimates corresponding to indicators measuring operational performance is statistically significant.

Finally we see that innovation is important for organizational performance. Information management has the greatest overall impact on organizational performance. Improving information management is found to increase the odds of greater organizational performance by 25%.

### Concluding remarks

Although it is generally accepted that there has been a shift from treating accounting and financial measures of performance as the 'foundation of performance to treating them as one among a broader set of measures' (Gunasekaran and McGaughey, 2003), in empirical studies published in the most prestigious management journals, financial indicators continue to remain the most prevalent measure of organizational performance (Richard, Devinney, Yip and Johnson, 2009). This is why we have

chosen to employ accounting indicators as dependent variables in our quantitative estimation of the impact of supply chain performance on organizational performance. Our results document the important contribution that marketing performance in the context of a supply chains plays in achieving the overall organizational performance. Results also show that financial and innovation performances are also positively impacting the overall organizational performance. Information management has the greatest overall impact on organizational performance. Nevertheless the structural adaptation and internal communication do not have a statistically significant impact on organizational performance. We appreciate that our findings contribute to a better understanding of the impact of different areas of performance in the supply chains have on the overall organizational performance. This study offers Romanian managers a guideline to focus their efforts on those performance areas in the supply chains with most important impact on organizational performance.

As a limitation of this research we mention that estimating the impact of supply chain management on organizational perspective could benefit from a more detailed analysis of the performance in supply chains. Consequently we propose that future research should employ performance metrics relevant for every logistics process in the context of a supply chain. Furthermore, we propose that future research should measure the impact of logistics performance on all supply chain participants.

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# CULTURAL DIMENSIONS AND WORK MOTIVATION IN THE EUROPEAN UNION

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**Abstract:** *For decades, the field of work motivation was moulded mainly by the cultural constraints. The present scientific paper is a theoretical research which aims at identifying various motivational patterns which might be used in the EU countries. In order to illustrate these differences, we will use three Hofstede's cultural dimensions: individualism, uncertainty avoidance and masculinity. Each of these cultural dimensions presents particularities which exert an influence on the way of thinking, on the abilities and behaviours of the individuals in a certain society, but we will refer only at the influence on the attitude towards work. For the identification of the motivational patterns, we will have as starting points, on one side, the particularities of the cultural differences and results of the relevant research performed so far; on the other hand there is Maslow's hierarchy of needs. Hence, we can consider that safety and security prevails upon other needs where uncertainty avoidance is strong (Greece, Romania and so on). The need of belongingness will prevail upon the need of esteem in the feminine cultures (such as Sweden, Latvia), but in the masculine cultures esteem need is stronger (such as in the case of Hungary). In masculine countries with an increased collectivism (Greece), the opportunities for improvement, recognition and extra incomes will have an increased importance, while in feminine countries (Holland, Sweden) personal time, freedom and need for belongingness will be more important. Without claiming to be an exhaustive presentation of the motivational patterns, the purpose of the present paper is to underline the necessity that the motivation theories are to be considered valid only in the cultural environment where they were conceived. The transfer and the application of the motivation theories and patterns from one culture to the other, implies the testing of their validity in the new context.*

**Keywords:** cultural dimensions, Hofstede, work motivation, EU

**JEL classification:** M12, M16

## 1. Introduction

The extension of the activities of the companies at International level implies the increase of the complexity of the activities they develop and at the same time, the development and diversification of the human resources management tools used for managing the cultural, economical and political values which influence the activity. For ages the field of the work motivation was mainly modelled by the

occidental theories, each theory being subject to cultural constraints, for which the cultural factor cannot be neglected.

The present scientific paper aims at identifying various motivational patterns which might be used in the EU countries. Because of the tensions of the past years in the EU, the cultural differences between the member states have been perceived significantly. In order to show these differences, we will use three of Hofstede's cultural dimensions: individualism, uncertainty avoidance and masculinity. Each of these cultural dimensions shows particularities which exert an influence on the way of thinking, the attitudes and the behaviour of the individuals in a certain society, but we will refer only to the influence of the attitude towards work.

In order to identify the motivation patterns, we will have as starting point the particularities of the cultural dimensions and the results of the relevant research performed so far.

## **2. The concept of culture and the study of cultural dimensions**

The concept of culture knows various definitions in the specialized literature. Therefore, Hofstede defines culture as: "mental collective programming which makes us accept something together with the members of the nation or the group that we are part of, but not with the components of other groups or nations (Hofstede, 1996, p.43). Another definition is the one given by House (House et al, 2002, in Alas Ruth, 2006) who considers that culture manifests in the shape of "motives, values, beliefs, identities and events shared which result from the common experience of the members of the groups and which are transmitted from one generation to the other". The analysis of the cultural differences can be realized only on the base of certain criteria, which make the comparison possible. These are called cultural dimensions and in the past few decades several studies have been conducted for the identification of those cultural dimensions which can be used for explaining the differences between the cultures. The most important studies belong to: Geert Hofstede, Edward T. Hall, Florence Kluckhohn and Fred Strodtbeck, Charles Hampden-Turner and Fons Trompenaars, Robert House (coordinator of the GLOBE project), Shalom Schwartz. A few of these studies will be presented briefly.

*Schwartz*: in an International study on high school students and teachers in 67 countries (1994) identified three cultural bipolar dimensions: conservatism versus autonomy, hierarchization versus equality and artistry / self achievement versus harmony, based on seven basic values (Ng, Sorensen, & Yim, 2009).

*Inglehart* (World Value Survey): proposes two cultural dimensions: well-being – survival, secular-rational authority – traditional authority (Ng, Sorensen, & Yim, 2009).

*House* (the coordinator of the GLOBE): The GLOBE study can be considered one of the largest studies on the national cultures. This is a project that involved over 170 researchers from 62 cultures in all the main regions of the world. From the GLOBE study new cultural dimensions resulted: uncertainty avoidance, orientation towards the future, distance towards power, institutional collectivism, orientation towards person, performance orientation, group collectivism, equality, assertion (Alas, 2006).

*Hofstede*: his approach consists in six cultural dimensions, that is: individualism versus collectivism, distance versus power, uncertainty avoidance, masculinity versus femininity, orientation towards time and permissibility versus austerity.

However, most studies which refer to National culture use Hofstede's cultural dimensions. A search in the Social Science Citation Index indicates the fact that between 1987 and 2004, Hofstede's works *Culture's Consequences* from 1980 and 2001 were quoted 2858 times, almost as frequently as Karl Marx' s *Capital* work (2873 quotations) (Bearden, Money, & Nevins, 2006).

Hofstede's model regarding the cultural dimensions has along the time both sustainers and critiques. One of them is McSweeney, which is in the article *Hofstede's Model of National Cultural Differences and their Consequences: A Triumph of Faith - a Failure of Analysis*, published in 2002, critiques both the research tool used by Hofstede and the data analysis pattern (McSweeney, 2002), and Bearden et. All (2006) question the validity of the tool used by Hofstede to capture the complex multidimensional nature of the culture at individual level, considering the tool used by Hofstede unidimensionally (Bearden, Money, & Nevins, 2006).

Due to the spread of use of Hofstede in the cultural studies and the replications and confirmation in multiple following research, in this scientific paper we will use Hofstede's approach.

### **3. The work motivation and the influence of the cultural factor**

The motivation is a force which is said to act in each individual making it choose an action or another one. Cultural values influence how an individual perceives and interprets a situation, and therefore exerts influence on his behavior and motivation (Erez, 2008). As a collective mental programming, the culture plays an important part in motivation. Culture influences not only our behaviours, but also the reasons for which we choose to behave in one way or the other (Hofstede, Hofstede, & Minkov, 2010, p. 315).

Different assumptions regarding motivation lead to various motivation theories, although classic motivation literates in the management context are American (Maslow, McClelland, Herzberg etc.). Therefore, one will discuss whether the motivational theories can be valid in cultures different from the ones they were realized in.

One of the motivational theories which reflect its American origin is the one of Frederick Herzberg based on the motivation-hygiene dichotomy. From the cultural point of view, Herzberg's theory corresponds to an environment in which the distance from the power is small and the avoidance of uncertainty is low. In the countries in which the distance from the power is big, "surveillance" must not be seen as a hygiene factor, because in this type of culture the dependence on stronger people is a fundamental need which must be a real motivator (Hofstede, Hofstede, & Minkov, 2010, p. 316).

Another example is the X and Y theory. The suppositions of this theory reflects the values of an individualist and masculine culture such as the one in which McGregor formed and the distinction between X and Y theory is not relevant in certain cultures, such as the ones in Asia (Hofstede, Hofstede, & Minkov, 2010, p. 318).

Numerous studies on work and attitude towards work in various cultural contexts underlines the importance of the cultural factor. For example, in the cultures in which masculinity is pronounced, there is a high need of accomplishment and the accomplishment is defined through acknowledgement and wealth. The strong masculine cultures appreciate material possessions and extra incomes, while the

feminine culture stress on the work conditions and the employees' participation (Greckhamer, 2011). This suggests the fact that the motivation practices in a feminine culture will be less efficient or completely inefficient in a masculine culture. Other authors (Rinne, Steel, & Fairweather, 2012) explore the connection between Hofstede's cultural dimensions and the innovation level expressed by the Global Innovation Index (GII) scores. They identified a strong negative correlation with power and the number of innovations expressed through the scores Global Innovation Index (GII) and a positive link between individualism and the GII scores (Rinne, Steel, & Fairweather, 2012). The connections between Hofstede's cultural dimensions were studied by Shane as well (1992). His research identified a positive correlation between the number of patents for inventions and individualism and a negative correlation between the distance compared to power and number of patents (Ng, Sorensen, & Yim, 2009).

Ng&all (2009) tested and confirmed the hypothesis according to which the relationship between the work satisfaction and work performance is stronger in individualist cultures, where the distance from the power is smaller and which are masculine. Since the employees in the cultures where the distance from the power is bigger expect to be told by the superiors what to do and how to do, it is probable that the work satisfaction exerts a smaller influence than in the cultures which stress on social equality. In the cultures which appreciate material possessions (masculine cultures) a positive attitude towards the work can generate performance, because satisfied employees will dedicate a lot time and energy for the activities with the purpose of obtaining money or climbing the hierarchic ladder. In contrast, in the cultures which appreciate harmony and human relationships (feminine cultures), satisfied employees may prefer to dedicate more time to social activities which do not necessarily exert influence on the performance (Ng, Sorensen, & Yim, 2009).

#### **4. Individualism, uncertainty avoidance, masculinity and motivation in the EU**

As stated in the official site, although EU is a unique political and economical partnership between 27 European countries (EU official site), as a consequence of the lately tensions inside the EU, the cultural differences between members states have been massively perceived. The purpose of this document is to bring attention on the cultural differences between the EU member states, showing various motivational models with the help of the cultural dimensions which might be used in the EU countries.

As stated before, due to the broad use of Hofstede's dimensions in the cultural studies in this paper we will use Hofstede's approach. More precisely we will use three of the six cultural dimensions: *individualism (IDV)*, *uncertainty avoidance (UAI)*, *masculinity (MAS)*.

Hence, a brief presentation of the three cultural dimensions is required. *Individualism* is characteristic of the societies in which the connections between individuals are weak: it is expected that each of them takes care of itself and the close family. On the other hand, *collectivism* belongs to the societies in which individuals are integrated since birth in strong and unite groups which keep on protecting it during its entire life (Hofstede, Hofstede, & Minkov, 2010, p. 92).

*Uncertainty avoidance* can be defined as the measure in which the members of a culture feel threatened by ambiguous situations or unknown situations. This feeling is expressed, amongst other, through nervous tensions and need of predictability –

the need for written and unwritten rules (Hofstede, Hofstede, & Minkov, 2010, p. 187).

A society is called *masculine* if the emotional gender roles are set apart clearly: men need to be authoritarian, tough and focused on the material success, while women must be modest, tender and focused on the quality of life. A society is called *feminine* if the gender emotional roles overlap: both men and women must prove modesty, tenderness and preoccupation for the quality of life (Hofstede, Hofstede, & Minkov, 2010, p. 141).

Each of these cultural dimensions has particularities which exert an influence on the way of thinking, the attitudes and the behaviours of individuals in a certain society, but we will refer only to the attitude towards work. For a better image we will take into consideration the cultural dimensions two by two (on one side uncertainty avoidance and masculinity and, on the other hand, individualism and masculinity) and we will represent graphically the way the UE countries are distributed in four quadrants.

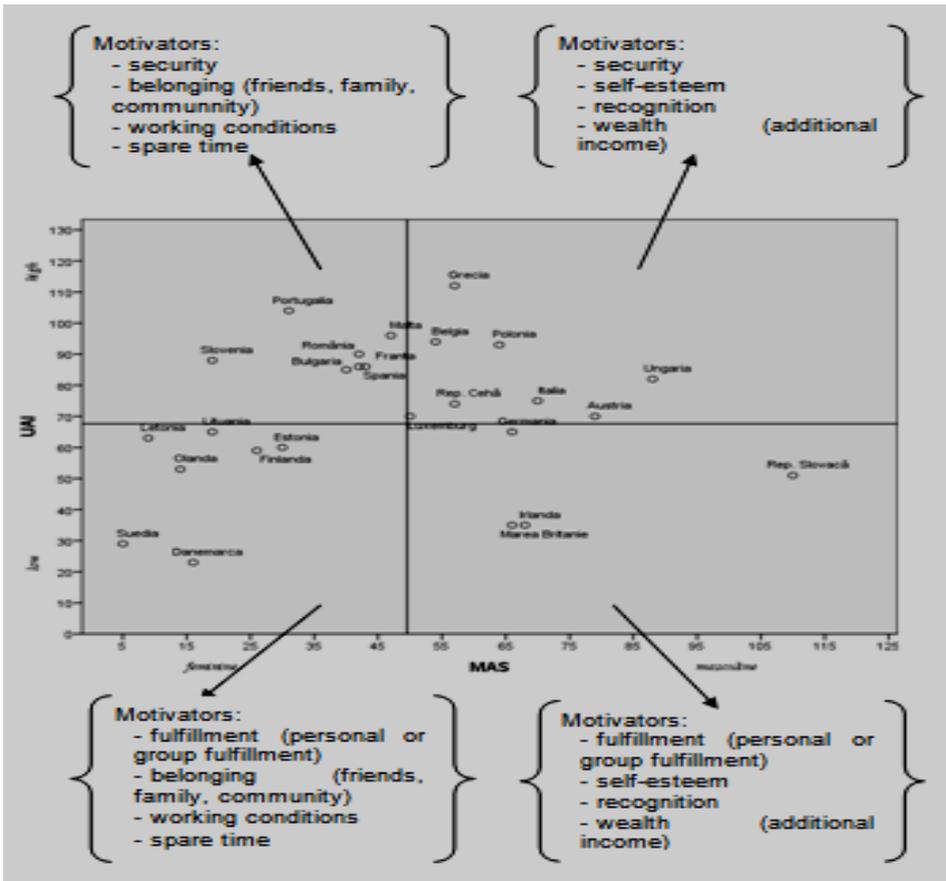
The particularities of the cultural dimension together with Maslow's needs pyramid will represent the starting point in the identification of the motivation needs.

Disposed as a pyramid, according to Maslow these needs are (from the base to the top): physiological needs, security needs, social and belongingness needs, esteem and accomplishment needs. Adler (1991) argues that the frame of references of an individual is what determines the importance of his needs, and that the frame of references is partly determined by culture (Geren, 2011). So, these needs require a reordering according to the cultural specific of a country. Hence, we can consider that safety and security prevails on other needs where the avoidance of uncertainty is strong. The need for belongingness (family relations, friends, etc.) will prevail on the need for esteem in feminine cultures, but in the masculine cultures the esteem need will be stronger.

As seen in figure 1, most of the countries are equally distributed in three quadrants (upper left, lower left and upper right). Romania is included in the upper-left quadrant, being feminine (but on the borderline with masculinity) and with a high level of uncertainty avoidance. The extremes are:

- reduced uncertainty avoidance: Denmark;
- intense uncertainty avoidance: Greece;
- masculinity: Slovak Republic;
- femininity: Sweden

Hence, in figure 1, the motivation factors will be (personal or group) satisfaction and esteem in the upper right corner; achievement and belongingness in the lower left corner; security and belongingness in the upper left corner. In some cultures there can be the need of adding new needs, such as: respect, harmony etc. (especially in the case of Asian cultures) (Hofstede, Hofstede, & Minkov, 2010, pg. 210-211).



**Figure 1.** Uncertainty avoidance, masculinity and work motivation in EU  
 Source: made by authors based on Hofstede's scores for the two cultural dimensions (available at <http://www.geerthofstede.nl/research--vsm>).

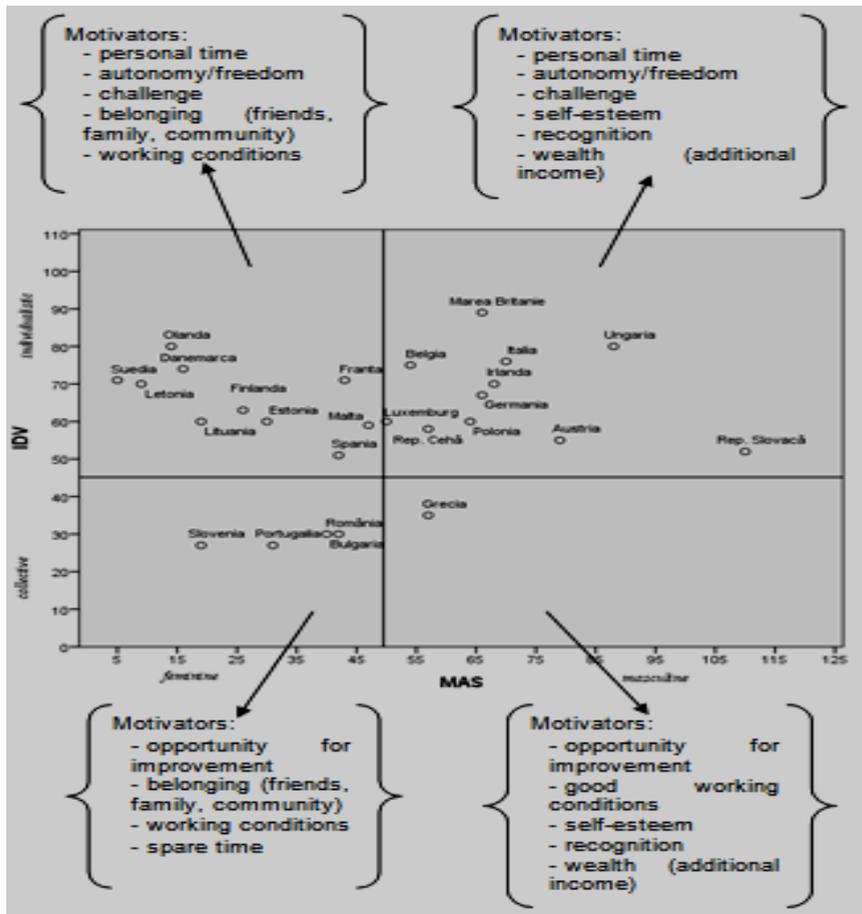
When taking into account individualism and masculinity, the distribution of countries across the four quadrants (figure 2) highlights again the need to adapt the motivational models to the cultural specificity of a country.

As shown in figure 2, most countries are distributed in two of the quadrants (upper left and upper right); Greece is alone in the lower right quadrant. Romania is included in the lower left quadrant, being feminine (but at the borderline with masculinity) and with a pronounced collectivism. The extremes are:

- collectivism: Slovenia and Portugal;
- individualism: Great Britain;
- masculinity: Slovak Republic;
- femininity: Sweden

Hence, in figure 2, personal time, freedom, challenge, belongingness and work conditions will have a special importance in the upper left quadrant; the personal time, freedom, challenge, esteem, recognition and wealth in the upper right corner; perfecting opportunities, belongingness, work conditions and free time in the lower

left quadrant; and the perfecting opportunities, work conditions, esteem, recognition and wealth in the lower right quadrant.



**Figure 2.** Individualism, masculinity and work motivation in EU

Source: made by authors based on Hofstede's scores for the two cultural dimensions (available at <http://www.geerthofstede.nl/research--vsm>).

It is not difficult to associate the importance of the personal time, the freedom and the personal challenge with individualism; all these underline the employee's independence from the organization. The work purposes associated with collectivism: perfecting, physical conditions and use of the abilities refer to things that the organization makes for the employee and hence it underlines the dependence of the employee towards the organization (Hofstede, Hofstede, & Minkov, 2010, p. 93).

## 5. Conclusions

We stand along side the researchers that support and promote the need to adapt and develop motivational theories that take into account the cultural specificity of a

country. Since the interactions (economical and not only) between the EU member states are unavoidable, the neglect of the cultural factor may lead any such interaction to failure.

Without the claim of an exhaustive presentation of the motivation models, we consider that the present action can represent a starting point for testing the validity of the motivation theory in other cultural context than the ones they were conceived in.

Since the observations in one culture are not mandatory applicable or valid in other cultures as well, we recommend that the motivation theories be implied to be valid only in the cultural environment they were conceived in. They overlap some cultural constraints and they reflect that culture in which the author / authors formed and performed the research (Hofstede, Hofstede, & Minkov, 2010, p. 317). In order to be applied in a different culture than the one they were conceived in, the motivation theories must be adapted and their validity must be verified. A testing example of the validity is given by Deci&all, who, in 2001 made a study for the verification of the possibility of generalizing the Self-determination theory to the level of other cultures. The analysis perceived offers proof that this theory can be valid also in cultures different than the one it was conceived in, but there are differences related to the intensity between needs and motivation, so that the cultural factor must be taken into consideration (Deci, Ryan, Gagné, Leone, Usunov, & Kornazheva, 2001).

The transfer and application of the results of a research from one culture to the other without testing their validity in the new context must be avoided. The organizations that extent to a multinational level must give special attention to cultural differences and to perform analysis before applying policies and procedures (Ng, Sorensen, & Yim, 2009).

## **6. Acknowledgements**

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# NEW APPROACHES OF THE CONCEPTS OF HUMAN RESOURCES, HUMAN RESOURCE MANAGEMENT AND STRATEGIC HUMAN RESOURCE MANAGEMENT

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**Abstract:** *This paper presents the most representative approaches to concepts of human resources, human resource management and strategic human resource management in the last two decades, based on purely theoretical analysis of the concepts mentioned above.*

*The purpose of this paper is to demonstrate through a critical analysis of concepts, that in this era of change and uncertainty, attention to human resources of an organization has changed radically. It can be seen by analyzing the definitions, evolving concepts of human resources, human resource management, strategic human resource management over time. Analyzing the authors approaches regarding the concept of "human resource" it is observed that is no longer assign the term "cost element", present authors define it as a strategic component of organizations.*

*In turn, human resources management has evolved considerably.*

*The period during which the department deals with purely administrative activities, preparing various documents, payroll is no longer valid. Note, by analyzing the literature, a strategic approach to human resource management, focusing on strategic human resource planning, selective recruitment and selection, training, motivation of employees, involving them in decision making, teamwork, reward performance based, creating a working environment, with particular emphasis on organizational climate.*

*Organizations have realized the role of human resources, human resources management in the survival and development.*

*Through this article we want to conclude that at the moment it is absolutely necessary strategic approach to human resource management to allow straightening organization to obtain a competitive advantage over other competitors in the field.*

*Competitive advantage has a critical role in the survival of organizations and is managed by Human Resources Management. This may be reflected in better financial performance (higher sales, increased profit), but also by non-financial performance (organizational reputation with customers and potential employees).*

*M. Porter highlights the important role of human resources within an organization, considering that in any business there are potential sources for obtaining competitive advantage. It comes from the ability of firms to master better than its rivals competitive forces. Any subdivision organizational structure and any employee of the organization, no matter how far away lies the strategy development process, contributing to gaining and maintaining competitive advantage.*

**Keyword:** *human resources, human resource management, strategic human resource management, competitive advantage*

**JEL classification:** *J24, M10, M12*

## **Introduction**

Nowadays there are many more risks and uncertainties than at any other time in the past, as a result of disruptive innovations and unexpected shocks coming. This is the new normal, an era of constant turmoil and chaos increased. (Kotler & Caslione, 2009)

This new normal led strategic behavior among new managers to minimize vulnerabilities and help them exploit the opportunities in the new normal.

Organizations often arrive at certain strategic points of inflection, when the old strategy does not give the desired results and should be quickly replaced with a new one.

In terms of data security can guarantee the success of any business that extensively cultivated or not, can be the most powerful obstacle to success. (Roger Martin, 2010) Period in which managers and other decision makers in organizations were focused and gave a critical role only tangible assets, quantifiable, and financial resources, has long faded.

In this "new era" was aware of the importance of human resources within an organization, human resource management role evolved considerably in recent years. Now, managers talk about the importance of "human" in the success of the organization, often using the term "human capital".

I noticed, looking at the literature, that this change in business mentality has occurred since the 1990s, significantly increasing the role of human resources with the advent of the "new economy" (Porter, 1998).

"New economy" has culminated in the development of important innovations, the most significant being computers and the Internet. Is the period in which they arise and develop emerging industry sectors like IT information technology, telecommunications, financial institutions.

There is a similarity between the two periods, the "new economy" and the present, in terms of innovation. At present, the most reliable source to obtain competitive advantage by organizations is innovation.

A awareness the importance of human resources in the organization, which proved to be vital, and currently occurred.

Now, investment in human resources is seen as a strategic approach to be constantly optimized and not as an element of costs to be minimized and kept as low a level.

Practice has proved what sets professionals in their work, namely that the success of an organization lies in its people. Organization's objectives can be met only if it has the necessary human resources and competencies, as required in this respect a rigorous strategic planning of human resources requirements. This process can be considered but a challenge for HR managers under this era of change, because "what was the future a year ago is now gone." (Roger Martin)

It is not difficult to formulate objectives for an organization; much more difficult it is to establish and to personally ensure that these objectives are realistic. (Mathis, R., Nica, P., Rusu, C., 1997)

In the same vein, J. Naisbitt and P. Aberdene (1985) states: "... human capital has replaced dollar capital as a strategic resource".

## **2. Human Resource Management**

Currently there are different concepts and approaches of modern human resource management in organizations.

In this paper I want to present some recent approaches of the concept, which I discovered by reading various books in the field. I want to conclude with a critical analysis, referring me to the similarities and differences between them.

Boselie (2010) addressed human resource management by focusing on sharing relationship that exists between employees and the organization. Thus, in his view, work report includes four types of contracts:

- Contract law - usually encompasses stipulated in a contract establishes the rights and obligations that arise between employees and the organization (eg, number of holidays, terms and conditions relating to confidentiality)
- Economic and trade agreement (employer and employee determine employee work effort, reflected in the number of working days and how much the employer pays for the submission of this work, within salary)
- Psychological contract (contains all those elements that are not directly stated but are expected by the two actors - the employee and the organization. Example, employees are willing to invest additional time in a project because it can promote them in next.)
- Sociological contract (relations and networks that employees have with the organization - eg teamwork)

In another approach, consider that "Human resources management operates in an environment where there is a continuous tension between value added and moral values." (Paauwe, 2004).

Paauwe defined as value added economic dimension of work organization, the role that HR plays in creating economic value and increase financial performance in an organization.

Moral values reflect the notion of employees in terms of human beings with feelings, emotions, opinions, norms and values.

A study of Paauwe and Boselie in 2004 concluded that:

- Human resources are more than just "resources";
- Human resource management is focused not only on getting financial performance;
- Human resource management is focused on transfer relationship between employees and the organization;
- Employee relations gained importance in an era of continuous tension between adding value and moral values.

In his acceptance Boxall and Purcell (2003):

- Human resource management refers to all labor groups, including employees basic peripheral employees and contingent workers;
- Human resources management involves line managers and specialist staff is not only;
- Human resource management managing work and people, both collectively and individually;
- Human resource management is incorporated both in industry and society.

Legge (1995) distinguish between human resource management focused on achieving material results (HR hard) and one who is interested in the creation of conditions necessary to obtain these results (HR software).

So, Legge's opinion there:

- Human Resources Management "hard" - focused on economic outcomes (dominant in organizations)
- Human resources management "soft" - focused on the human side of work organization human resources

Several authors in the literature have made reference to human resource management featuring two models:

- The Anglo-Saxon or Anglo-American - focused on creating shareholder value, in terms of profit and market value, with little attention, if any, to other stakeholders
- The Rhineland - is focused on the interests of all stakeholders (not just shareholder) is given importance and interest of employees

Analyzing approaches to human resources management concept presented above, it is easily seen that all authors wanted to reveal the crucial role that human resources department within an organization it is. The purpose of this department is not only to achieve by harnessing the potential of human resources, material and financial results as large, but to create an environment for their fulfillment.

Therefore, human resource management is to shape people and their activities so as to achieve maximum performance. Purpose of human resource management activities is to make employees want their organization as well as organization make employees want, so the organization to achieve its goals.

As mentioned Novac E. (2008), "Human resource management is one that provides a systematic check on a set of interrelated processes affecting and involving all members of an organization, processes that include human resource planning, recruitment, selection and evaluation employee training and human resources development, motivating and rewarding employees. "

### **3. Strategic Human Resource Management**

Strategic Human Resource Management has developed rapidly in recent years, especially because of the impact that human resources have had on the competitiveness of organizations. (Lefter, Marincas, Puia, 2007)

So there was an awareness that, at present, an organization cannot survive or develop without obtaining a competitive advantage over other competitors.

Manageability instrumental in obtaining the competitive advantage it has human resource management.

The fundamental objective of strategic human resource management is to generate strategic capability to ensure that the organization has highly qualified, highly motivated employees to achieve competitive advantage. (Popescu, Marincas, Puia, 2007)

According to Lefter, Marincas, Puia (2007), Strategic Human Resource Management must take into account several aspects:

- Predictions about the economic progress of the industry in which the company operates and customers
- Position competitors (technology they use, sale price, market share)
- Policy selling short, medium and long
- The uncertain evolution of sales
- Investment Policy and technologies to be implemented in future
- Production policy that will take the company into the future
- Consequences of certain factors that contribute to the emergence of new qualifications and changes in work organization management or planning

Strategic human resource management involves a collection of practices, programs and policies that facilitate the strategic objectives of the organization (Mello, J., A., 2006). It proved, however, that there is the best way to lead people, human

resources practices vary from one organization to another. In any organization, however, the essential condition for success is that human resource management system to support and sustain a clear mission and strategy.

Is focused on aligning human resources management at general business strategy, creating high-performance work systems and adding value through better management of people so that they sustain competitive advantage. (Delery & Doty, 1996)

In conclusion, strategic approach to human resources management is very much focused in the moment, manageability human effort to obtain competitive advantage.

#### **4. Conclusions**

Under current conditions, the authors of the literature finds it necessary heady a strategic approach to human resource management, which means abandoning old thinking and practices and focus more on strategic than operational side of the organization.

In the authors opinion, the focus should be on transforming human resources function a priority for the organization. It is very important to integrate all human resources policies and programs in the organization's overall strategy.

Therefore, businesses need a strategic approach to human resource management, human resource strategy must be integrated into the overall strategy of the organization.

This requires a certain degree, that those in charge of the organization to learn more about HR issues and activities and human resources managers to acquire some knowledge about economic transactions, business contracts, the company's products, market outlets, financial situation of the organization.

In strategic human resource management, human resources department plays a key role and has a strong influence in strategic decisions at the organizational level.

In our opinion, human resource management at the micro level (HR policies and practices) is necessary but not sufficient for organizations to gain a competitive advantage, especially sustainable. To face competition from others, organizations should move to a strategic approach to human resource management.

Success or failure of an organization probably not entirely due to his practice of strategic human resource management, but these practices are likely to be critical.

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## DEFINING ASPECTS OF HUMAN RESOURCE MANAGEMENT STRATEGY WITHIN THE GENERAL STRATEGY OF THE MODERN ORGANIZATION

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**Abstract:** *The field of human resources requires the presence and action of several categories of persons and managerial structures interested in the quality of human resources and the activities developed by them. Besides managers and employees there are also the shareholders, the unions, the customers, the different national or local agencies, the local community, etc., with major interests regarding decisions in the human resources area. In order to harmonize their activities and achieve an optimal perspective within the evolution of Human Resource Management, special attention is paid to the strategy of human resources management. According to many specialists, strategies in the field of Human Resource Management show, in the first place, that personnel function adopts a broader perspective and a more dynamic view of human resources, which enables its full integration within the other functions of the organization. In the second place, strategies in the field of Human Resource Management designate the assembly of long term objectives concerning human resources, the main modalities of achieving them and the necessary resources which guarantee that the organization's structure, value and culture as well as the utilization of its personnel contribute to fulfilling the general objectives of the organization. Therefore, we approached in this paper the problems of grounding and elaborating the Human Resource Management strategy, and we outlined their specific traits, as these are necessary aspects in order to emphasise at the end of our paper the correlation between the strategy in the field of Human Resource Management and the general strategy of the organization. Taking into account specialists and practitioners' increased interest in knowing, substantiating and implementing strategies in the area of Human Resource Management, we consider that the aspects presented in this paper are modern issues and a starting pointing in solving the great problems of organizations nowadays. Thus, contemporary economic thinking is invited to solve the numerous challenges that society faces in general, aspects that can be solved, we believe, only if a strategic Human Resource Management is achieved with great professionalism. Therefore, Human Resource Management strategies constitute a continuous challenge for organizations' researchers and a real possibility to attain performance within organizations, be they present in a national or international area.*

**Keywords:** *strategy; Human Resource Management strategy; the general strategy of the organization; organization; implementation; substantiation.*

**JEL classification:** M12

## 1. Introduction

When conceiving and substantiating organizations' activities, an important role is played by strategies, especially Human Resource Management strategies, elaborated and implemented by managerial organisms. The essential concretization of the prevision, the strategies of Human Resource Management contour the development of each organization in the field of human resources, and their content often decides the efficiency of the interface with the subsystems to which it belongs, the extent to which they maintain and amplify the efficiency and effectiveness of the activities developed.

In managerial practice there is a certain scepticism regarding the necessity and opportunity of Human Resource Management strategy, considering that the environment where the activity of the organization takes place is unstable, submitted to some irregular fluctuations, hence its uselessness, on the one hand; on the other hand it is considered that a plan is profitable only if it is respected, which does no longer ensure flexibility as an imperative trait that conditions the survival and development of an organization.

In this respect, the objectives of Human Resource Management define and express synthetically the aims envisaged and the criteria to evaluate the future activity in the field of Human Resource Management, and the Human Resource Management strategy describes – explicitly and implicitly – the directions to follow, the modalities or ways to attain specific purposes under the form of the objectives formulated for a 3-5 year span. Only under the circumstances of knowing the specific traits, of grounding and implementing Human Resource Management strategy, are the objectives of the organization fulfilled and its competitiveness increased.

## 2. Concept and specific traits of Human Resource Management strategy

The history of the word 'strategy' began many millenniums ago. In this respect, the remarks made by American Brian Quinn are interesting: "At first, during early Greek antiquity, the word «strategos» referred to the role of a general in charge of an army. Then, it acquired the sense of «a general's art», referring to the psychological and behavioural abilities that enabled a general to fulfill his role. In Pericles' time (450 B. C.) strategy was perceived as a managerial quality (administrative, leadership, oratory, power), and during the reign of Alexander the Great (330 B. C.), strategy referred to the ability to unfold forces in order to overwhelm opposition (the enemy) and create a unitary system of global government. This sense was used for centuries in most military approaches, expanding in other fields as well in the 20<sup>th</sup> century" (Nicolescu and Verboncu, 2008:130).

The idea of strategy appeared in social sciences around the '40's, with the game theory, designating the moves thought or played by one of the players.

During the '60's the term was used in order to define some of the most important decisions within companies. The fundamental work in the field is Igor Ansoff's *Corporale Strategy* (1965, original ed.), which had a great influence and was the first in a series of works that envisaged the foundation, clarification and application of managerial strategies (Gazier, 2003:30).

Since then, things have moved very fast and starting with the '80's everything or almost everything became strategy in economy, sociology, psychology, anthropology. Whether they speak about groups' or individuals' interests, economic, sentimental, esthetic options – more or less reasonable and elaborated – or even

about sequences and attitudes, more and more authors have started to think in strategic terms.

Referring strictly to the economic field, the results of the research made by one of the greatest specialists in management, Henry Mintzberg, signaled the presence of 10 schools of managerial thinking as far as strategy is concerned, after examining 1495 works dedicated to strategy. In table no. 1, authors Nicolescu O. and Verboncu I. (2008) present synthetically which these schools are and their defining traits concerning strategy elaboration – the most important element from the point of view of managerial practice.

In this respect, there are more and more numerous hints and analyses that show that human resources have a strategic potential and make the difference in the long run, changing an organization's future.

**Table no. 1** Strategy schools

<b>No.</b>	<b>Strategic name</b>	<b>Strategic elaboration seen as a process</b>
1.	Designing	Conceptualized
2.	Planning	Formalized
3.	Positioning	Analytic
4.	Entrepreneurial	Visionary
5.	Cognitive	Mental
6.	Learning	Emergent (contoured across time)
7.	Political	Based on power
8.	Cultural	Ideological
9.	Environmental	Passive
10.	Configurative	Sequential

Also, in many authors' opinion, like for instance Michael Armstrong, personnel strategies define the intentions of the organization regarding the human resources development directions, as well as the necessities or requirements that have to be met in this area in order to facilitate the fulfillment of organizational objectives (Manolescu, 1998:105).

Consequently, Human Resource Management strategies are to start from both operational objectives and human resources peculiarities and use an adequate investigation methodology which should provide a reasonable direction of the efforts in this field (Manolescu, 1998:105).

At the same time, Galbraith and Nathanson, famous specialists in the explicit approach of Human Resource Management strategies, researching the role of human resources in the implementation of organizational strategy, outlined the following basic fields of Human Resource Management, where adequate strategies can be developed (Feris and Buckley, 1996: 9): selecting personnel; evaluating performances; rewarding employees; training employees.

In our opinion, starting from the definitions given to strategy, to Human Resource Management, namely to the place and role of Human Resource Management within the general strategy of the organization, the Human Resource Management strategy can be defined as:

- the assembly of major objectives and modalities of attaining them, of Human Resource Management concerning the optimal utilization of human resources in the

long run, in order to ensure the efficiency of the organization and of the benefits of each of its members;

- the assembly of the objectives, policies, programs and fundamental decisions through which it is possible to determine, for a long period of time, the general direction of the evolution and viability of Human Resource Management through the harmonization of the relations between employers and employees, meant to guarantee productivity and efficiency increase within the organization;

- a mixture of significant activities, substantiated and elaborated by Human Resource Management in the long run, directed to the effective utilization of human resources, in order to attain the goals of the organization and to satisfy the needs of the employees;

- a distinct field of the strategy of the organization's management through which Human Resource Management strategy envisages in the long run recruiting, selecting, training and developing the employees' performances, their motivation and responsibility in order to efficiently attain the goals of the organization;

- the mission, namely the long term commitment aims and modalities of Human Resource Management through the specific involvement of the other resources of the organization in order to attain its objectives.

Obviously, we could continue with the presentation of other significant definitions connected to Human Resource Management strategy, but we believe that they would not contain further remarkable elements.

By analyzing the content of the definitions given by different authors and of those suggested by us, the following characteristic traits of Human Resource Management strategy can be outlined:

- Human Resource Management strategy always envisages – explicitly and implicitly – attaining some well-established goals, specified as mission, aims and objectives;

- strategy envisages future spans in the field of Human Resource Management, usually 3-5 years long. Hence, a certain degree of risk and uncertainty associated with it, with some consequences in the operation process;

- the area is specific to Human Resource Management and to the general problems of the organization;

- the content of the strategy envisages essential elements, focusing on the major aspects of human resources evolution in order to support the organization so as to survive and develop;

- strategy takes into account and is influenced by the interests of the organization's owner, managers and especially by the interests of those who administrate human resources, namely the employees. The better this reality is known and respected, the greater the chances to apply the strategy successfully;

- strategy means improving a competitive type of behaviour with managers and employees in the long run, taking into account the culture of the organization;

We consider that the definitions given by us in this part of the paper and our view of the foundation of Human Resource Management strategy are an attempt to explain and clarify some important aspects of this reality which is so necessary for the present, and especially for the future efficient and effective functioning of national and multinational organizations.

### **3. Substantiating, elaborating and implementing strategy in the field of Human Resource Management**

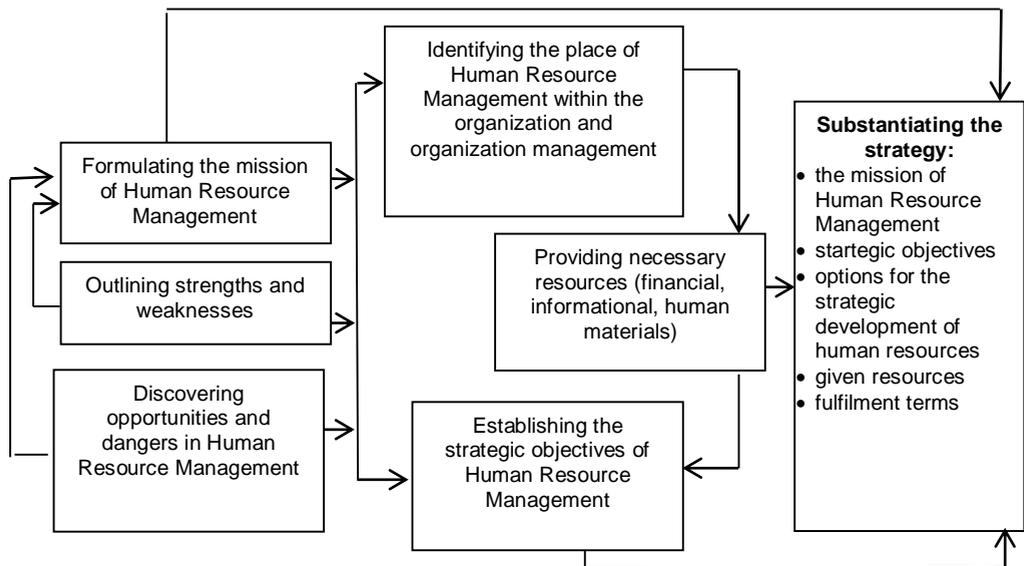
When valuing the human resources potential of the organization in the long run, through efficient Human Resource Management strategies an important role is played by the substantiation of Human Resource Management strategy. This basically means identifying and taking into account the scientific programs which envisage the future activities of the organization and hence the formulation of some prognoses characterizing Human Resource Management to maintain them.

Prognoses, as tools of knowing and investigating the future processes of the organization in general, in the field of its human resources in particular, constitute the logic, realistic and objective support of the substantiation of the necessities and possibilities of the future evolution of human resources.

Considering some appreciations formulated as far as human resources strategy is concerned (Armstrong, 1996: 171), we estimate that the following problems with an impact on the substantiation of Human Resource Management strategy become very important:

- the intentions and possibilities of increasing, integrating, diversifying or concentrating the activity of the organization by taking into account the environmental national and international factors, especially those concerning market / production;
- the appreciations regarding the new perspectives about the selection, formation and promotion of human resources in accordance with the new transformations at the level of the organization;
- the evaluation regarding the efficiency and effectiveness in the long run of Human Resource Management in order to ensure an increased performance of the organization;
- the necessity to develop an organizational culture directed towards performance;
- other environmental factors (opportunities or threats) which can influence Human Resource Management, as for instance: governmental interference, European legislation, competition or pressures on the workforce market, the quality of personnel training, the diminution of the interest in academic training with high school pupils, demographic reduction, etc.

On the whole, the process of substantiating Human Resource Management strategy is presented in figure no.1.



**Fig. no. 1** – the process of substantiating Human Resource Management strategy

As shown in figure no. 1, the substantiation of Human Resource Management is finalised by elaborating and formulating it. In order to elaborate Human Resource Management strategy, the fundamental problem, as Rolf Bühner opines is the analysis of the human resources the organization has at a certain moment, as well as of the opportunities and specific risks that exist or may appear in the field of human resources when there is competition with other organizations. (Bühner, 1994: 43).

Human Resource Management will impose easier the envisaged measures and cross faster the process of elaborating human resources strategy if it involves the organization's staff in this process. Thus, the organization's members will be encouraged and motivated to have the same opinion about the strengths and weaknesses of the organization, as well as about the environment where it functions. To do so, special attention will be paid to the communication process, so as to make the members of the organization trust and be interested enough in establishing the organization's perspective.

Strategy implementation is achieved in connection with the elements that define the general organizational context and the one specific to the field of human resources, namely: the seriousness of the firm's strategic difficulties; the type of implemented strategy; the available financial resources; the configuration of the personnel's mentality; the organizational relations; the urgency of getting performance in the short run.

Human Resources Management went through significant evolution. The newly conceived idea of strategic management in human resources is the consequence of past and coming changes (Karaszewska, 2010)

From this point of view, the success of Human Resource Management strategy depends on a good internal organization and on the existence of competent personnel. We suggest that internal organization involves: elaborating a Human Resource structure compatible with the strategic necessities of the organization and the necessary human resources in order to develop it and promote some adequate management relations; the identification of distinct aims and competences, envisaging managerial aptitudes, the know-how and the other necessary resources; selecting people for key functions. Ensuring the motivational support for the employees plays an essential role in the success of a strategy.

Considering these conditionings, managers often have to fulfil very different roles. They have to act as undertakers, administrators, people in charge with solving problems in crisis situations, negotiators, motivators, mentors and so on. Only thus can managers in the Human Resource field support the missions and actions required by the implementation of Human Resource Management strategy.

The aspects analyzed concerning the content, substantiation, elaboration and implementation of Human Resource Management strategy were correlated with certain ideas that envisage the organization's global strategy. From the perspective of the possibility of identifying the contribution of Human Resource Management strategy through its increased efficiency and effectiveness to the maintenance and consolidation of the national and multinational performance, we consider that outlining some correlative aspects of the two strategies is both useful from a theoretical and practical point of view and necessary in order to fulfil the organization's objectives.

#### **4. Correlating strategy in the field of Human Resource Management with the general strategy of the organization**

Strategies in the field of management are fundamental, formulated and implemented at different levels of an organization's management.

From this point of view, we can identify general strategies (Nica, 2008: 104) or corporative ones and functional strategies (Gazier, 2003: 32).

*General strategy* as a strategy developed at the level of the organization has the strategy of the organization's management as distinct field, and *functional strategy* envisages the specialised compartments and the autonomous fields of strategy, namely Human Resource strategy, with its important vector Human Resource Management.

Through the specialised activities which it prefigures, Human Resource Management Strategy within the organization's general strategy ensures the conditions of its adequate implementation through human resources' availability and capacity.

Taking into account the importance of human resources for the performance level and the competitiveness of the organization's activity, no other field of functional strategies is as vital as the one referring to the organization's employees.

The relation between Human Resource Management strategy and the general strategy of the organization is that from one part to the whole, and the interdependencies between them can be identified under the form of some influence factors in both senses.

- General strategy influences the management strategy of human resources by establishing the general objectives of the organization, for a well-established future

period, a part of them being made up of objectives that envisage the organization's personnel directly.

- In turn, Human Resource Management strategy influences the general strategy of the organization, by the fact that the objectives of the former are formulated in such a way as to allow , through aggregation, the achievement of the integrated ones, either directly or indirectly, with the help of other objectives ; the success of Human Resource Management strategy leads to the strategic general success of the fundamental objectives.

Human Resource Management strategies are established after the global or general strategy of the organization is known, taking into account competition's conditions or contextual evolutions.

In this respect, the model of personnel strategy, conceived by Armstrong M. (1996) (fig. no. 2) suggests that the elaboration of personnel strategies should take into account the most relevant organizational or environmental aspects, as well as those belonging to the field of human resources.



**Fig. no. 2** – The personnel strategy model (after M. Armstrong)

Elaborating strategies in the field of human resources is in fact the result of a continuous process of analysis or diagnostic of all the activities within the organization, as well as of the directions the organization is heading towards.

Consequently, Human Resource Management strategy has a derived character, it is a partial strategy which refers only to certain activities within the organization, namely to those that belong to the Human Resource function. Human Resource Management strategies are usually concretized in policies and programs in the field of human resources, and the objectives, strategic options and resources that are to be involved have smaller dimensions.

From this point of view, numerous outstanding papers in the field frequently mention the great importance of the accord between the general objectives of the

organization and the objectives in the field of Human Resource Management, between the general strategy and the Human Resource Management strategy, which involves:

- providing the necessary human resources in order to ensure the organization's strategy;
- developing human resources to allow further strategies within the organization.

In this context, we also mention the fact that more and more specialists in the area are for establishing a full accord between general strategies and strategies in the field of Human Resource Management, which finally led to the emergence of new concepts, like, for instance, "*strategic integration*", "*strategic accord*" or "*strategic Human Resource Management*"

If within general strategy, establishing or building some stable market/ product relations is in the foreground, then Human Resource Management strategy has to be directed towards:

- the intensive development of the personnel in order to ensure their qualification, as well as the improvement of the activity in relation with the clients;
- the long term personnel planning in order to ensure the necessary human resources in the future too;
- the intensification of internal personnel advancement in order to use their potential as efficiently and long as possible.

The examination of the mentioned aspects shows that there are major differences between the general strategy of the organization and the strategy in the field of Human Resource Management. If general strategy refers to the organization as a whole and usually covers the entire organization, affecting all its activities directly or indirectly, Human Resource Management strategy envisages a distinct component, the most important one, and considers correlating results and actions with other compartments and subsystems, starting from the general objectives of global strategy.

The content of the aspects presented so far demonstrates clearly that, in order to fulfil their objectives, organizations in general, irrespective of their nature and size, have been forced to deal with some challenges meant to try their *capacity of ensuring and maintaining success in competition by anticipating contextual evolutions*.

## **5. Conclusions**

Organizations exist because people have limited mental and physical capabilities, and the ability to have and develop organizations. All organizations need their human resources, regardless of how many people will experience some aspects of management as limiting their individual freedom of action.

In this regard, human resources is one of the most important investments of an organization, whose results become more obvious over time.

When conceiving and substantiating activities in the field of human resources, a very important role is played by strategies, which do not represent an aim in themselves, but impose themselves more and more as essential components of Human Resource Management and major managerial modalities of professionalizing it.

Thus, Human Resource Management strategy can have shocking results only when there is a tight cooperation between the top management of the organization and Human Resource Management.

Because of the economic crisis, the dynamic action of internal and international factors, the change in the coming physiognomy of the organization, elaborating a prognosis in the field of Human Resource Management which should emphasize the complex and difficult process of the organization's efficiency in a national and international environment, becomes a condition of the organization's economic and managerial success in the long run, with most important consequences for the future of the organization, irrespective of its size and national or international character. Nowadays, and even more in the future, the role and place of strategies in the field of Human Resource Management will increase from the point of view of its importance and significance, and their implementation requires a cumulus of quality activities, which is a fundamental condition in order.

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## INTEGRATED DOCUMENT MANAGEMENT SOLUTION FOR THE LOCAL GOVERNMENT

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**Abstract:** *In this paper we present system analysis and design elements for the integrated document management solution at local governing authorities in the rural areas. While specifically dealing with the actual management of the Agricultural Register, an important primary unitary evidence document, we also keep a general character of the discussion, in order to argue for the generality of the proposed solution. Hence, for the identified and described problem space we propose an administrative and software infrastructure solution. This work is an empirical research in which our aim is primarily to identify key problems within the local governing authorities from several perspectives concerning the management of the Agricultural Register then to address those problems with an integrated document management system. For the proposed solution we give and argue the general system architecture and describe the key-mechanisms that support quality requirements. The relevance of this research concern is given by the impact of the actual Agricultural Register management on important stakeholders. This can be measured as the satisfaction felt by taxpayers and the performance of the local governing authorities, the Financial Administration, the Agency of Payments and Intervention in Agriculture and the Ministry of Agriculture and Rural Development. This work is also intended as a start-point for a new, modern thinking of the governing authorities, in their pursue to improve public services. For this, in our work we highlight the importance of complete system analysis at all administrative levels as a main priority concern for all public managers. Our aim is the improvement of the public service by raising the awareness of the decision makers on the necessity of using integrated document management solutions for the provided services. Also, our work aims at increasing the efficiency with which nowadays, governing authorities invest public funds in various IT projects for the management of their services. For this, we highlight the importance of documenting quality requirements during system analysis.*

**Keywords:** *Local government; integrated system; decision making; document management; Agricultural Register.*

**JEL classification:** *M15, H11*

## Introduction

Improving the public service offered to citizens through integrated software systems should be a permanent concern of the public managers (West, 2005). More, the concern for integrating software systems running at different government bodies within the European Union is an actual concern of the European Commission (EC, 2011).

To modernize means adapting to requirements, to the exigencies of the present, renewing, updating, moving from a static organization characterized by inertia to a dynamic one, adapted to a changing environment in fast transformation. To modernize also means adopting modern behaviors considered innovative in comparison with the previous ones. Therefore, knowledge policies such as research, innovation, education and training are very important for the future of the Romanian public administration.

The administrative reform should be always a current topic on the public agenda. There are several problems that the local government in Romania is facing, leading to the appearance of significant disparities in socioeconomic development:

- territorial excessive fragmentation and inadequate dimensioning of administrative - territorial units, with negative effects on adapting the provided services according to European standards of quality and efficiency;
- high operating costs for administrative territorial units, especially in rural areas and small towns leading to a low investment level at this level;
- low absorption rates of structural and cohesion funds by many villages – development regions with a preponderant statistical role, lead to their incapacity to really play the role that the European Union is projecting for the regional level in the planning for 2014 - 2020.

An efficient local public management involves means of organizing such as: the main organizing directions, implementation of a complex IT program, developing and implementing the Code of Conduct for clerks, relationships with civil society institutions, organizing and conducting environment related activities.

According to article 3 of Romanian Law no. 544/2001 regarding free access to information of public interest, providing access to public information by authorities and institutions is made ex officio or upon request, through the public relations department or the person designated for this purpose.

In Romania, as in most European countries, the practice shows an increasing involvement level of citizens, under at least two aspects:

- information procedures, more and more diversified: motivation of administrative documents, access to administrative documents, reducing the application field of the "administrative secrecy";
- participation procedures, also increasingly frequent: not only consultancy, but also techniques involving a more active role for recipients of administrative action, public inquiries, developing non contentious administrative procedure laws etc.

The progress of IT and of derived methods facilitates this type of relationships, which involves a different form of government, less authoritarian and less rigid.

Nowadays, in many Romanian public administration agencies one can easily note the bureaucracy. Some general causes for this phenomenon can be the maintaining of complicated administrative procedures, the failure to comply with set time-limits

for processing requests, documents flow fragmentation, the presence of offices without IT equipment and technologies, inability to generalize processes, at least when dealing with taxes and the "single window" system.

The consistency of the public administrative management improvement can increase the efficiency of the relationship between central and local government, between the public authorities at national level and those from rural areas and cities. Nowadays we cannot identify an integrated information system of central and local government to support all social policy decisions.

Reorganizing and restructuring the central and local administration requires an increased level of efficiency in document management and decision making.

A frequently required document by citizens in the rural areas is based on information included in the Agricultural Register. This is an official document of primary unitary evidence, containing sections like: the composition of the household/ agricultural holding, owned land identified by parcels, forests in public/ private ownership, the use of agricultural areas regarding the arable area cultivated with the main crops, orchards areas and the number of trees, vineyards, grapevine nurseries, irrigated areas and livestock.

In this work we present system analysis and design elements for the integrated management of the Agricultural Register at local governing authorities in the rural areas. For the proposed solution we give and argue the general system architecture and describe the key-mechanisms that support the identified quality requirements.

The remaining of this paper is organized as follows. In Section 1 we present the background of our work, in Section 2 we describe the problem space, in Section 3 we argue the proposed solution. In Section 4 we present related work and we conclude in Section 5.

## **1. Background**

The research work that aims an efficient public administration assumes interdisciplinary work where the research team address IT, managerial and legal issues under a variety of approaches (Wright, 2011).

The public administration can be seen as a system of institutions or various administrative structures organizing and implementing the central state laws.

Although the characteristics of public administration mechanisms are different from country to country within the European Union, increasing their efficiency requires their harmonization. The values that define the European administrative field are: transparency, predictability, responsibility, adaptability and efficiency (Androniceanu, 2007). Romania is one of the European Union's member states that still deals with the process of adopting and implementing these values.

Improving the management of public institutions in Romania towards alignment with the European standards is a necessity for the contemporary public management system, in a context of major changes which need to be faced both by each public institution, and by the entire system as a whole.

Public institutions cannot be isolated from the general social system. Therefore the relationship between these institutions and the citizens should be a matter of great interest for the public managers. The main objective when improving the management of public institutions is increasing the level of satisfaction of the citizens (Androniceanu, 2007).

The relationship between public institutions and citizens can be improved by:

- increasing rigor in reasoning and replying as well as shortening the response time to requests submitted by citizens;
- reducing bureaucracy of the central and local government agencies;
- strengthening and enlarging the participation of civil society in decision-making;
- ensuring transparency of administrative documents and communicating operatively with citizens.

## **2. Description of the problem space**

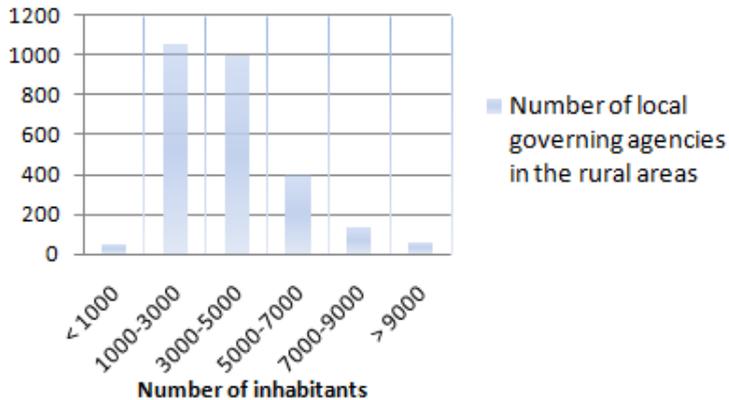
In this section we provide a description of the problem space from two main perspectives. One is represented by the public institutions responsible with local governance and the other is determined by the taxpayers. In our discussion we firstly identify and describe the stakeholders from each perspective by highlighting their needs then we present the relationships among them as components of a whole information system.

Within the governance perspective we consider three types of key state institution: local governing authorities in the rural areas, the Financial Administration, the Agency of Payment and Intervention in Agriculture (APIA).

In our context the local governing authority represents a functional structure with permanent activity, consisting of mayor, deputy mayor, secretary of the administrative-territorial unit and the special unit of the mayor. The aim of the local governing authority is to solve current problems of the local community (Romanian Law 286/2006, article 4). In this work we consider the rural areas where the local governing authorities offer services to a small set of surrounding villages. The average administrative territorial area is 9000 hectares (INS, 2013). Also, in average, a district manages the activity of 70 local governing authorities in the rural areas.

In figure 1 we present the distribution of the local governing authority's size (in number of citizens) in the rural areas according to the Romanian Statistical Yearbook (INS, 2013). In this graph we observe that most of the local governing authorities have a small number of citizens. Obviously, this aspect raise challenges in terms of public management efficiency.

In our discussion the fiscal body operating within the local governing authorities have the responsibility of collecting taxes from the taxpayers. Hence, it operates as a speciality compartment within the local governing authority but its activity is subordinated to the central fiscal body, to which it reports the evolution of the tax collection process.



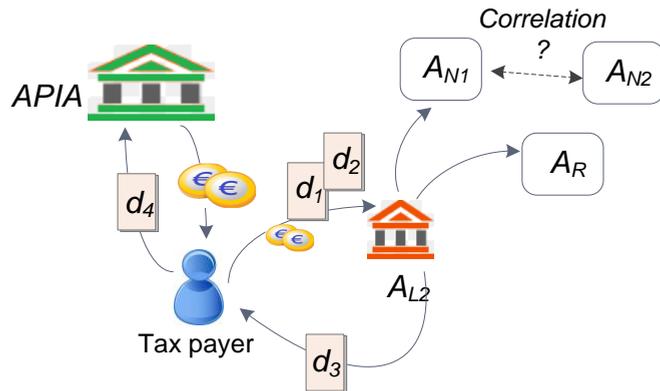
**Figure 1:** The distribution of the local governing administration size.  
Source: Authors' contribution

The Agency for Payments and Intervention in Agriculture (APIA) operates under the Ministry of Agriculture and Rural Development according to the Romanian Law 1/2004 with subsequent amendments. The institution has the following organization: central unit, 42 district centres and 210 local centres. Hence, this body has a nationally spread structure which can be characterized as a tree with three administrative levels.

Since January 2007, APIA is in charge for carrying European funds to implement support measures financed by the European Agricultural Guarantee Fund (EAGF). The subventions are awarded to farmers as direct payments per hectare, managed by the Integrated Administration and Control System (IACS) according to the market measures for the implementation of trade mechanisms under the Common Agricultural Policy (CAP). Regarding the management of the European funds granted to farmers, APIA has the following main responsibilities:

- Provides verification of payment requests received from beneficiaries;
- Authorize the payments to beneficiaries after verifying their payment requests;
- Notifies the beneficiaries of any irregularities noticed in order to resolve them;
- Runs authorized payments to beneficiaries;
- Tracks the framing within the funds allocated for the activities mentioned above;
- Ensure that the requirements regarding public information on its activities.

In figure 2 we present the interactions of a taxpayer with the local governing authority and APIA. In this context the taxpayer is either an individual or a legal representative of a company that owns or rents a given surface of land within the administrative territorial area of a local governing authority, denoted with AL2. The taxpayer has a yearly obligation of tax payment to the local governing authority according to Romanian Laws 273/2006, 215/2001 and the 28/2008 Government Ordinance, all with subsequent modifications.



**Figure 2:** Overview of the problem space at local level.  
Source: Authors' contribution

In relationship with APiA, the taxpayer that has a position opened in the Agricultural Register is called farmer. Yearly, a farmer that is registered at APiA receives an invitation to declare her land, culture types and livestock for the current year. For this, the farmer has to obtain a certificate with the content of her position in the Agricultural Register. This document is issued by the local governing authority and we denote it with  $d_3$ . Forward, the farmer goes to the local APiA centre on the scheduled date and submits a request for payment, denoted with  $d_4$ . After a while, for the valid requests for payment, APiA orders the bank transfers for the calculated amounts, to the farmers' bank accounts.

For the previously discussed context we identify a set of main issues, which we forward describe. The taxpayer declares the land surfaces, buildings and other taxable properties to the tax office within the local governing authority. This is one of the bases for calculating the annual tax for a contributor. Yearly, the same taxpayer declares to the Agricultural Register office values for the same list as to the tax office. At different key-moments like the end of the financial year, the local governing authorities are facing problems when confronting synthetic data from the two offices. They sometimes find substantial differences between the two amounts, leading to confusion and lack of governance control.

Some local governing authorities have developed applications for the tax collection management. Even these agencies could find sooner the previously described issue due to various process and document flow defects. In this case, other taxpayers may have to spend significant time intervals waiting in line to access the service. Hence, we note a loss of time for both the clerk and the concerned citizens.

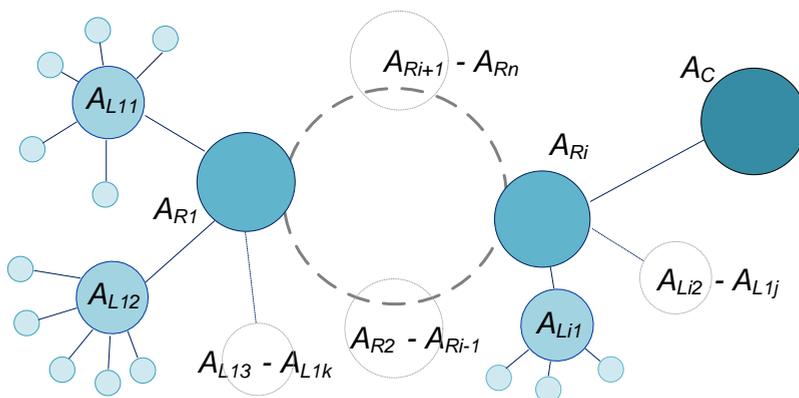
At national public management level, the lack of an integrated system for the public services can lead to lack of data correlation, decisions and actions between different state institutions, denoted with  $A_{N1}$  and  $A_{N2}$  in figure 2.

A real understanding of the scale impact caused by the before mentioned issues can be obtained if we multiply the defects with the number of local governing authorities at national level.

### 3. Proposed solution

In this section we present the solution proposed to address the problems identified in section 2. Hence for two distinct perspectives – governance and infrastructure we give the details of a collaborative integrated system, highlighting important system requirements. We consider that this discussion could start interesting research challenges in the fields, leading to a better social welfare.

We consider that software and hardware infrastructures of quality should be major concerns of the governing authorities at all levels. In this context we define quality as realistic standards created and imposed by public governing authorities to partners developing their software and hardware infrastructures in order to obtain maximum satisfaction. Through satisfaction we refer to a guaranteed system behavior, according to valid quality system requirements professionally documented, and accordingly felt by all types of stakeholder.



**Figure 3:** General architecture of the proposed system.  
Source: Authors' contribution

Forward in this section we present the vision for a software solution that addresses the problems identified and described in section 2. We propose a general system architecture, we describe coordination and integration mechanisms for the solution, we document the system features and finally discuss the benefits for stakeholders. In figure 3 we depict the solution proposed for the Agricultural Register management. This is a hybrid system architecture, using the client-server model for the document management at local and regional levels and a peer-to-peer model for the integration of all regional governing authorities at national level. Consequently, we can state that the system is a super-peer network.

We propose a client-server communication model for the regional (at district level) management of the Agricultural Register. The rationale for this approach is that a regional administrative entity is motivated to provide the necessary infrastructure for the subordinate local authorities. As we discussed in section 2, a local governing authority would provide service (i.e. store backup data) for an average of 70 local governing authorities. Another reason for this architecture choice is that the client component running at local governing authorities are independent, managing data from the local context. The advantage is their functional independence from a permanent Internet connection, which could be a real issue for some rural areas. In

general, the communication between AL and AR should comprise periodical saving of backup data, exceptionally obtain recovery data and access data from other regional governing agencies.

The client component running at AL should have local backup mechanisms. Since some of the local authorities have unstable, poor or no Internet connection, the system should provide for the server component running at AR manual update mechanisms. This would function as follows: a user creates a dump file at AL, and then uploads the respective file from a computer connected to the Internet (which can be geographically located outside the local governing agency). By this, the server component can keep more accurate data for subordinate authorities even with no or poor Internet connection with them. Consequently, governing stakeholders from upper levels (AR, AC) will have more up-to-date information regarding the Agricultural Register.

In figure 3, for a clearer presentation of the system architecture we omitted to represent all local and regional governing entities. Hence, AR1 is also connected to the remaining local authorities AL13 – AL1k.

A server component is running at each regional governing authority, which for the current national administrative organization is considered at district level. A server component has also knowledge (i.e. is connected to) of some of the other servers running at regional governing authorities. For this, we propose the employment of the Chord protocol (Stoica et al., 2001, 2003). The advantages of such a distributed solution at national level would imply:

- High fault tolerance of the system due to distribution of data and functionality over the structure at regional level: the server components would communicate in a peer-to-peer fashion among them.
- Insignificant or no down-times for the server components: due to the distribution mechanisms, the role played by a particular server running at AR could be rapidly taken over by another server in the system in case of unexpected failure. This also provides the means for an easy planned maintenance of servers.
- Prevent the system from malfunctioning due to local or regional hazards.
- Reduce the costs with maintenance and local data backup at any AR since data is replicated across the system.

A distinct component that runs at the central governing authority (AC) would provide to stakeholders means for generating various reports on data from all regional governing authorities. The proposed distributed architecture at regional level allows the central authority to access data from any AR.

Another important advantage of the overall proposed system architecture is the capability of integrating any other services that nowadays run on different independent systems at local and regional governing authorities. This solution is capable of supporting other similar services, since it relies on abstract, elastic and adaptive communication mechanisms fitting to the governing organizational structure.

The presented architecture supports the collaboration of the components, allowing the development of a system with integrated functionalities. More, the architecture takes into account the users from different governing levels, which is essential for obtaining an integrated system (Danaiata et al., 2008).

An integrated document management solution for the local governing authorities

would provide through collaboration and communication mechanisms means of integration with other systems employed by other governmental bodies.

More, when designing such a collaborative system with super-peer architecture, the system designer can easily add new levels of abstraction, or build new overlaying functional layers. In the context of regionalization, new functionality can be easily added to the system, which, for instance, would provide service for certain groups of governing authorities at district level. In this way, we insure the maintainability of the system.

The impact of the system on different types of stakeholder from local, regional and central governing authorities is significant, since it leads to a better control over the administrative processes due to availability of more accurate data compared to the traditional informational system. Also, stakeholders can be more reactive to context changes due to the availability of synthetic information reported by the system shortly after data registration in territory, at local level.

#### **4. Related work**

Kunis et al. (2007) propose a model for document management in e-government systems based on hierarchical process folders, providing security mechanisms that are tailored to the processing of distributed government processes within and between authorities.

In Viscusi et al. (2010) we find the pursue of studying the importance of the knowledge in information systems for all public administrators. Their findings show strong correlations of information systems background of the public administrators and the quality of the provided services and related processes. More, the authors present methodological frameworks for developing optimal e-government plans while considering technological, economic, organizational and legal aspects. The methodology relies on the quality of the provided services and related processes, as well as the quality of the data managed in the administrative services and processes.

The research group of the United Nations Department of Economic and Social Affairs showed in a recent study (Qian et al., 2012) the benefits of public investments in IT infrastructures made by local governing authorities in rural areas from different countries. Also, the authors present the pursuit of many UN Member States to move from a decentralized single-purpose organization model to an integrated whole-of-government model in order to increase the effectiveness and efficiency of the administrative processes. More, the study argue for the interconnection of different state individual agencies in order to deliver services that successfully deal with the complex economic and social challenges.

#### **5. Conclusion and future work**

In this work we presented system analysis and design elements for the management of the Agricultural Register issue at local governing authorities in the rural areas. For the proposed solution we gave and argued the general system architecture, describing the key-mechanisms that support the identified quality requirements. We showed the importance of the integration of services while designing a system and highlighted the impact of the quality requirements on the satisfaction and efficiency of the stakeholders.

As future work we propose to develop this analysis by documenting and validating

functional and quality requirements for the proposed solution in the discussed context. We also intend to continue this work with a detailed economic analysis for the proposed system in order to identify the resources needed for its development.

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# THE IMPACT OF THE WORK ENVIRONMENT ON THE ACTIVITY OF THE EMPLOYEES WITH LOW QUALITY RELATIONSHIPS

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**Abstract:** *The paper tries to identify the contextual factors that influence positively the level of work effort made by the employees who have low quality relationships with their hierarchical superiors. According to the control theory regarding the leader-employee relationship we can state that a higher work effort than the expected one is due to the fact that in certain working environments can offer control to those who normally do not have it, thus serving as substitute of the high quality leader-employee relationships. Studies have proven that for the employees that report low quality relationships with their superior, low competence of their superior, decentralized decision making and low perceptions of policies, high levels of the individual work effort are recorded. The paper highlights the theoretical and practical implications of these discoveries and offers directions for further research in this field.*

**Keywords:** work effort, competence, leader, control, contextual factors.

**JEL classification:** M12, M20, M21

## 1. Introduction

Many times leaders favour some employees to the detriment of the others or create advantages for the ones they favour (K.M.Kacman et al, 2007). The favoured employees generally benefit of more attention, support and guidance from their superiors, have easier access to key resources and important task allocation and get better performance scores than their less favoured colleagues (Graen,Novac 1982). Due to the important impact of the condition of favoured employee on career, researchers in the field of management have studied this dynamic for a long time (Liden, Sparrowe, Wayne,1997).

The theory of the leader-employee exchange is at the centre of this research field. This theory states that leadership is based on exchange relationships with subordinates. The central premise of this theory is that leaders develop individual relationships with employees, relationships that vary as far as their quality is concerned. Research studies have investigated the effects of these relationships quality on the work results. High quality relationships are characterized by allocating challenging tasks, emotional support both for decision making and resources exchange. The low quality exchange relationships are limited to the exchange of those resources that are essential for performing tasks (Taylor,Pierce, 1999).

A high quality relationship consists in the feeling of the employee that he belongs to a group. The employee has more responsibilities, more influence on decisions, satisfaction and access to resources. A low quality relationship emerges when the employee does not feel included in a group. The leader offers little support to the

employee, and this has less responsibilities and less capacity of influencing decisions.

So far, the theory of the leader-employee exchange has focused on understanding the antecedents and benefits associated with the high quality exchange relationships. Despite the importance of maximizing all employees' effort, research on the leader-employee exchange showed little interest to the understanding of the variables regarding the level of effort made by employees with a low quality exchange. Therefore, the goal of our research was to contest this generalized research line by concentrating on the contextual conditions in which employees involved in low quality exchanges will make efforts, despite the relatively poor relationships with their superiors. We use the control theory in order to explain the way in which three contextual variables – the perception on the superior's competence, centralization and organizational policies – have an impact on the perceptions of control and the wish to make an effort at the workplace of the employees with low quality exchange relationships.

## **2. The control theory and the contextual variables**

Research in the field of control (Spector, 1987) at the workplace suggests that high levels of perceived control are related to a combination of variables with important results, including high levels of job satisfaction, employment, involvement, performance and motivation and low levels of physical symptoms, emotional suffering, stress, absenteeism intention of leaving the workplace and staff turnover. Although a number of empirical studies have not succeeded in obtaining substantial effects of control interventions, perceived control is theoretically an important anticipator of a variety of work results, including motivation. Moreover, the expectancy theory of motivation (Vroom, 1964) suggests that, control at the workplace is an important anticipator of the employees' motivation and of the corresponding effort made by employees.

The expectancy theory of motivation (Vroom, 1964) suggests that individuals will not make an effort for a task related to something they do not expect to get success or rewards from. It is possible for employees in a low quality relationship with their superior to perceive with difficulty the occasions of acknowledgement of their performances or those of receiving rewards for the performance they achieve, because of the low quality relationship with their superior. Integrating the control theory and the expectancy theory, it results that the employees having high quality exchange relationships with their superior will perceive that they have access to resources, feed-back, support and the necessary communication in order to be successful and be rewarded with a high quality exchange relationship with their superior, so they will be motivated to make an effort. However, the perception of the lack of a quality relationship with the superior and the corresponding perception of losing control can lead to a diminished effort of those involved in low quality relationships.

A number of key environment variables can influence the perception of control that employees with low quality exchanges have on the environment and can, therefore, play a role in the level of effort that they are willing to make at work. Our arguments are in accord with the substitutes of the leadership theory which state that there is a variety of contextual and environment variables that can substitute or neutralize the effects of the various leader behaviours. Based on the control and leader-employee

exchange theories, we have selected three contextual variables of the work environment in order to analyse them in this study, variables that could substitute and/or neutralize the effect that a high quality exchange with the superior has on the effort made by the employee. More precisely, we analyse to what extent the environment characteristics of the superior's competence, decentralization and work policies have an impact on the degree to which an employee with low quality relationships finds reasons to make an effort at work.

Using the control theory as a theoretical framework, we anticipate that, when managers are competent, they are aware of everything that is going on in their environment and its proximity. This fact will limit the control that those with low quality relationships perceive, as they know that the superior is attentive and knows everything that is happening and that should happen. On the other hand, individuals that have an incompetent manager may consider that they have more control on their work, as their manager is not aware of everything that is going on. This reasoning suggests that individuals with low quality exchange relationships and that work for an incompetent superior might be willing to work more if they worked for a competent manager, as their efforts are not monitored or questioned, fact that gives them a feeling of control over their work in the work environment.

Similarly, the decentralized structures, which disseminate the power of making decisions to those who are directly affected by the decision, can be associated with the level of effort made by the employees with low quality exchange relationships. Individuals with low quality relationships that work in a highly centralized environment have to ask for permission before they act. Unfortunately, those with low quality relationships have limited access to their superior, thing that makes the task of getting permission extremely difficult. The combination of the two conditions, the need to ask for permission and the lack of the possibility of asking for it, may determine employees that work in such an environment to perceive a low control or not to find reasons for working harder. On the contrary, those with low quality relationships working in a decentralized environment are able to make decisions regarding the way and moment for achieving their tasks, having control and a reason in order to make an effort.

Individuals with low quality exchange relationships that work in a highly political environment may find few reasons to make an effort. Political environments are full of uncertainty and limit perceptions of control. For example, it is rarely clear for those who are outside the coalition having the power how and why crucial decisions are made, how rewards are given and how tasks are allocated. Working in an environment where there are no clear connections between effort and rewards limits the reasons a person has in order to make an effort. Thus, individuals that work in political environments and have a low quality relationship with their superior will not have the motivation to make an effort at work. However, the same individuals who have a low quality relationship with their superior, when they are in a transparent and apolitical work environment will perceive the connection between effort and rewards and will notice that they have more control over their work and the results they get. Such an environment will motivate employees having low quality relationships with their superiors to make an effort.

*The superiors' competence:* The superiors' competence has been studied under various aspects, including their skill, ability, managerial skills and managers' competence. Moreover, some researchers have studied the results of the superiors'

competence, including the organization's performance. Little is known about the effect of the superiors' competence on the work effort of the employees. Since one of the main tasks of the superior is managing the work effort of the employees, there is an urgent need for analysing this relationship empirically.

Moreover, the leader-employee exchange theory supports studying the effect that the superiors' competence has on the work effort of the employees. The leader-employee exchange suggests that the work effort of the employee is influenced by the relationship with the superior; employees that have high quality relationships get better results and performance than the employees with low quality relationships. If a superior has very good managerial abilities, he will probably be accustomed with organizing the workflow, delegating, communicating and encouraging participation, monitoring the progress made for achieving goals and offering feed-back. These things are good especially for the employees with high quality exchange relationships that enjoy the benefits of their superior's ability. The superior's increased competence may lead to an increase in effort of those having good exchange relationships with their superior, by increasing the perceptions of those employees that they are likely to receive rewards for their efforts.

However, for the employees with low quality exchange relationships the superior's competence may have opposite effects. We put forward the hypothesis that an individual that does not have a good exchange relationship will work more when he perceives that his superior is less competent. We suspect that if an employee considers his superior as being less competent, others will do the same. Less is expected from superiors with such a reputation. If from the field of an incompetent manager good things emerge, this fact is attributed to somebody else than the manager. Therefore, an individual, having low quality relationships with an incompetent superior, has better chances of being attributed the merits of his work, so he is motivated to work harder. The other way around, if an employee with low quality relationships works for a competent manager, harder work might not bring him the expected reward, because positive results will be attributed to the competent manager.

Our reasoning is also supported from the point of view of the control theory. More precisely, if a manager is competent he will be aware of everything going on. This fact will limit the control perceived by those with low quality relationships, because they know the superior is attentive and knows what is going on or what should be going on. The other way around, individuals who report to an incompetent manager may feel that they have more control over their work, because the superior is not aware of everything going on and the employees do whatever they wish to do whenever they wish to do. Again, this fact would suggest that individuals with low quality exchange relationships working for an incompetent superior would be willing to work more if they worked for a competent superior, as their efforts are not attentively monitored and questioned, thing which gives them a feeling of control over their work environment. For these reasons, we suspect that, the superiors' competence moderates the relationships between the quality of the exchange relationships between the leader and employees and the work effort.

In this context, ( K.M.Kcmar et al , 2007) we appreciate that *a perceived competence of the superior will moderate the relationship between the quality of the exchange relationships and the work effort, so that employees that report low quality exchange*

*relationships will evaluate the work effort as being higher when the superior's competence is lower.*

*The decentralized decision making:* Centralization refers to the extent to which the power of making decisions comes from the top of the organizational structure. A decentralized structure empowers its employees to make decisions regarding the work goals, the work structure and problem solving. In the highly centralized organizational structures, employees having good quality relationships with their superior will have an advantage due to the increased power of the superior of making decisions and due to the indirect power that they have as a result of the relationship that they have with the superior. However, for the employees that have low quality relationships with the superior, a centralized structure highlights their lack of control. Not only are they discouraged to make decisions, but they also have limited access to the superior who should decide what they have to do. Under highly centralized work circumstances, we suspect that employees with low quality relationships will make little effort.

On the other hand, we cannot make the same statement as far as the employees with low quality relationships working in decentralized environments are concerned. We would rather expect the same employees to make bigger efforts, since the freedom they enjoy by making their own decisions brings them a certain level of control over their life. This theory is supported by the leadership theory, which states that there are a variety of contextual and environment variables that can actually substitute or neutralize the effects of the leader behaviours. Leadership's neutralizers are characteristics that really make it impossible for relational leadership and/or task-oriented leadership to act. Therefore, decentralized structures may serve as neutralizers of leadership. As the leader's direct authority of making decisions is reduced, those having low quality relationships with the leader will be more motivated to make an effort at work, due to the perception that they have control over their environment. As a result, we put forward the hypothesis that for the individuals having low quality exchange relationships, a decentralized decision making structure will increase the efforts made at work.

In this context ( M.M.Kacman et al. , 2007), we can state that *centralization will moderate the relationship between the quality of exchange relationships and effort at work, so that employees that report exchange relationships of a reduced quality will evaluate the level of effort made as being higher in a decentralized environment.*

*The perceptions of work policies:* Organizational policies are actions that are directed toward the goal of promoting the interests of one person, without considering the well-being of others or the organization (Kacman – Baron, 1999). The specific tactics used for committing to a policy and the distinct purposes towards which behaviours are directed vary very much, reflecting, partially, the various reasons from which these behaviours emerge. Examples of the various reasons include pursuing their own interests, not forgiving others for previous injustice or the struggle for getting appreciated rewards. Political behaviours often include activities that are outside the sphere of the job's normal requirements and may involve actions that are not officially approved by the organization. Moreover, the real reasons for committing to these policies are often hidden. Finally, political behaviours regularly emerge when there is competition for limited resources and a lack of clear rules regarding the way of

allocating resources. The final result is the lack of clear reasoning regarding the way of giving rewards.

The lack of clear rules involves ambiguity, inequity and lack of control at the workplace. As it has been shown above, this type of environments can be acceptable and lacking threat for those that enjoy good quality exchange relationships with their superiors, as they are generally protected from negative consequences that emerge in the political work environments. However, not the same can be stated about the employees with low quality relationships. These individuals that are not protected by their superiors may be target of political tactics (e.g. the resources they need are not accessible to them) or may be affected by the consequences of these tactics (e.g. decisions on how they have to perform their tasks may be made, thing that might make these tasks much more difficult). Therefore, we expect the work effort of the individuals with low quality relationships and who work in political environments to be reduced. However, apolitical work environments are characterized by highly popularized and strictly followed rules and regulations, thing that brings order and control at the workplace (Kacman,1991). Employees that work in such environments will have a feeling of control and through this they will see the connection between effort and rewards, so they will increase their work efforts struggling to get favourable results. This reasoning suggests that the political perceptions moderate the relationships between the quality of the exchange relationships and the work effort. Starting from this thing we ( K.M.Kacman et al., 2007) consider that *policies at the workplace will moderate the relationship between the quality of exchange relationships and the work effort of the employee, so that employees that report low quality exchange relationships will evaluate the level of effort as being higher in the less political work environments.*

### **3. Conclusions**

The interest for exchanges between leader and employee continues to increase. Employees having low quality exchange relationships have a distinct disadvantage, both regarding career development and their potential of contributing to the organization's results. It is extremely important to understand how an environment can be created, one in which individuals with low quality relationships are willing to make an effort at work, but still the aspect has rarely been studied.

The results of our study show that the superior's competence, the centralized decision making and the perceptions of a political work environment moderate the relationship between the quality of the exchange relationship between leader and employee and the work effort of the employee. The form of these relationships indicates the fact that all of them serve as substitutes for a leader-employee exchange relationship of a low quality. Specifically, these variables, when they are present, can create a work environment that motivates individuals in leader-employee exchange relationships of a low quality to make more effort at work than the leader-employee exchange theory anticipated.

When employees with low quality exchange relationships understand that their superior is less than competent, they could have more control over their work, as the superior is not aware of everything going on and employees could do everything they wanted, as their superior's supervision capacity is low. The freedom of doing what you are asked to at the workplace without any interference from your superior may encourage the employee to make a bigger effort who would otherwise make a

minimum effort. Similarly, individuals with low quality leader-employee exchange relationships that work in a decentralized environment feel that they have more control over their work and, as they can make decisions on what and how to do, are willing to make a bigger effort at work than individuals in a similar situation, but in a centralized environment. In the end, if the work environment lacks policy, the work effort made by employees with low quality relationships may be bigger than that of the individuals in similar situations, but in a political environment. Again, using the control theory as explanation suggests that apolitical environments induce control feelings, that strengthen an individual's willingness to make an effort, because praises and rewards generated by his efforts are more likely to appear here than in a work environment.

The results of this study could be improved by including an estimation of the work effort of another person than the one who makes an effort. Collecting data on the effort made by the analysed employees by superiors and colleagues could lead to a more accurate evaluation.

Despite the limitations, this study may bring some contributions to the specialist literature and can have implications on the human resource departments. Our results indicate the fact that environment factors, the perceived competence of the superior, the centralized decision making and the low level of politics are positively related to the auto-estimated work effort of the employees that have low quality exchange relationships with their superior. These results suggest that efforts made by management to increase employees' control perceptions that do not have a good quality exchange relationship with their superior will be beneficial for the efforts these employees make at work. In order to achieve that, managers have to minimize policy behaviours at the workplace by implementing and adhering to work policies. Making these decisions will help employees to convince themselves that their performance will be rewarded, thus motivating them to maximize their efforts. Moreover, we discovered that it is important for the management to make sure that employees with low quality relationships have the autonomy to make decisions, in such a way that they should feel a certain control over their work environment. Therefore, managers ought to think at creating some operating motivation systems, which would support decentralized decision making. Such an action would bring an enormous contribution to the performance of employees with low quality exchange relationships, without diminishing the good performance of their colleagues with high quality exchange relationships.

Our results indicate that further investigation on the methods of maximizing the work efforts of the employees with low quality exchange relationships constitutes a promising research area. If our study is an initial viable analysis of this phenomenon, the next step would be carrying out a more sophisticated study in order to test key relationships. Some variations in data collecting and analysis could offer interesting results. Further studies could compare results using evaluations of the independent performance and self-evaluations. Moreover, the quality of the relationships could be independently evaluated by the hierarchical superior or collectively, using the leader-employee interaction. Finally, the moderators could be treated as group variables in the analysis. Although some researchers could sentence employees to stagnant careers and low evaluations of performance, our discoveries suggest that not everything is lost for these employees. Creating a work environment that would compensate the lack of leadership in their low quality exchange relationships is

possible by offering control over the work environment and by motivating them to make an effort at the workplace.

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# THE INTERDEPENDENCE BETWEEN MANAGEMENT, COMMUNICATION, ORGANIZATIONAL BEHAVIOR AND PERFORMANCE

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**Abstract:** *The approach of this paper is based on the concepts of management, communication and organizational behavior that by implementing the appropriate strategies, by taking and prevention of organizational risk that creates a favorable organizational climate that can improve, in time, the image of the organization, leading ultimately to making a synergic organization and to increase the organizational performance. An effective communication, followed by an efficient management provides safety in any domain of activity. Organizational communication cannot be seen outside of the management, and represents a fundamental component of it. The lack of communication or poor management of this process leads to alterations in key components of organizational management on one hand, and on the other, the lack of skills and organizational culture regarding these components invalidates the communication process. Today, communication has become increasingly important and more nuanced. At work, employees are faced with an overload of information, but with insufficient or even no communication. Information and communication are two different concepts, but that are interrelated, so information puts people in connection with certain information while communicating puts people in relation with others. Any communication process takes place in a context, which means that it takes place in a specific social, cultural, psychological, physical or temporal space, which is in close interdependence. Any behavioral attitude that we have in this space communicates something about us and determines, consciously or unconsciously, a reaction of positive or negative response from others and may be a factor in sustaining the process of social evolution. In an organizational context, attitudes, behavior can be found as organizational behavior, covering, in turn, a wide range of activities: knowledge and employee satisfaction, understanding group dynamics, accepting and respecting differences between people and of different cultural values that they come with, in the organization and many other skills, activities and management practices. Functionality and performances of an organization, regardless of the national context depend largely on how managers manage to create modern and flexible management systems, integrating in their structure many intra and extra organizational variables.*

**Keywords:** management, communication, organizational behavior, attitude, motivation, job satisfaction, performance.

**JEL classification:** M12

## **1. Introduction**

Organizational management has experienced an accelerated evolution in recent years due to changes on the labor market and socio-economic structures. This has resulted in a series of changes at the microeconomic level imposed by the need to adapt to new conditions in order to obtain maximum performance and impact (Novac, 2007:4). Thus, from the perspective of modern methods, organizational management and implicitly human resource management fall within the overall policy of the organization, the major objective being the overlap of individual interests with those of the organization. In this context, the new human resources management systems aim to clarify the place, role and duties of employees, to stimulate creativity and to establish an effective communication system that meets the participation needs of employee but, at the same time, they create premises to motivate employees and recognize their merits and achievements.

Today, communication is the main dimension of existence each of us, becoming so present, that is not even seen as a separate activity, its role being to put people in connection with each other, in the environment around them, by the content of transmitting and receiving messages aiming to achieve certain goals and passing on certain significances.

One of the important tasks of the manager is to motivate subordinates and creating an ambience of psychosocial leadership style, attitude towards daily problems of people, climate, cohesion, moods, to current interpersonal relationships and the whole preparation and living arrangements, to generate self-motivation, the strongest form of motivation (Pânzaru, 2009:36).

Knowledge of organizational behavior helps to better understand oneself and other people in a context mainly related to work. It can also extend personal potential for success in careers while the jobs are becoming more dynamic, complex and interesting.

To be an effective manager requires a combination of knowledge and experience. The study of organizational behavior produces no guiding principles but rather a series of statements whose explanation depends on the situation (Schermerhorn et al., 2002:42).

## **2. Organizational behavior - theoretical approach**

The founder of organizational behavior concept was Fritz Roethlisberger that together with Elton Mayo proceeded to identifying the relationship between individual and group behavior of labor productivity. Their first observation (Hawthorne study) was related to the importance of social relationships (informal), which proved to be more important even than the salary system (Stanciu and Ionescu, 2007:3).

A formal definition for organizational behavior can be: the study of individuals and groups in organizations. It involves understanding, predicting and controlling of human behavior. The most popular definitions follow a certain line: the study and understanding of individual and group behavior, of models and structures to improve performance and efficiency of the organization (Schermerhorn et al., 2002:3).

Although widely used in the organizational environment, the term "organizational behavior" is used improperly, because very rarely all members of an organization behave in a manner that represents the organization as a whole. In practice we should refer to the behavior of individuals and groups of people within an organization. The combination of "organizational behavior" has become common

and is widely used to refer to a large number of discipleship, influences, attitudes, and behavior patterns of people in organizations.

### **2.1. Field study of organizational behavior**

Interpersonal relationships between people take place through contextual communication in an environment where attitudes and behavior cannot be studied in isolation. From this point of view, it is important to understand human relationships in context with other variables that are included throughout the organization. The study of organizational behavior involves understanding the most important organizational factors:

- the type of management and management style;
- the organizational context environment;
- organizational processes and development of work;
- attitudinal and communication types of people;
- employee interactions with internal and external environment of the organization.

Organizations are composed of individuals. In turn, the individual is the most important component of the organizational behavior and is a necessary part of any attitude or behavioral situation, whether acting individually or as part of a group in response to the expectations of the organization to achieve organizational goals, or as a result of the influence of personal background or where they work. Each individual is a unique entity with unique personality which brings to the organization a new culture, a host of attitudes, values and past experiences. Where individual needs are not compatible with the organization's requirements situations of dissatisfaction, frustration and conflict may occur. It is the task of managers to create an organizational environment that allows individuals' needs satisfaction, adopting a positive organizational behavior and disappearance of conflicts to favorably achieve organizational goals and performance in work.

### **2.2. Characteristics of organizational behavior**

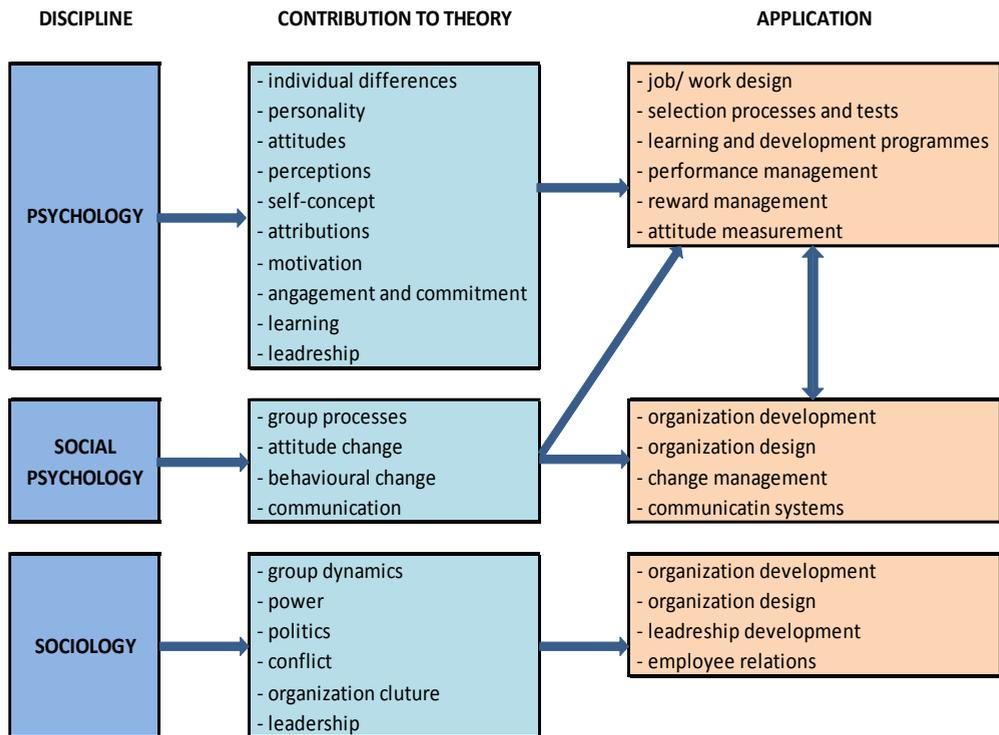
Ivancevich and collaborators (Ivancevich et al., 2008:82) identified the following characteristics of organizational behavior:

- it is a way of thinking about individuals, groups and organizations;
- is multidisciplinary - uses principles, models, theories and methods from other disciplines;
- it has a distinctly humanistic orientation - people and their attitudes, perceptions, learning abilities, feelings and goals are of a paramount importance;
- it is geared towards performance - studying factors affecting the performance and how it can be improved;
- the use of the scientific method is important in the study of variables and relations;
- it is oriented on the applied part of things in that it can provide answers when questions arise regarding the management of organizations.

Armstrong (Armstrong, 2009:295) argues that there are few factors affecting organizational behavior like the actions, reactions and interactions of people that constitute organizational behavior are influenced by the following factors:

- the characteristics of people at work – individual differences, attitudes, personality, attributions, orientation and the roles they play;
- how people are motivated;
- the process of employee engagement;
- the process of organizational commitment;
- how organizations function;
- organizational culture.

Figure 1 summarizes how each of the main organization behavior disciplines contribute, first to different aspects of organization behavior theory, which in turn influence HR practices.



**Figure 1** – The sources and application of organization behavior theory.  
Source: (Armstrong, 2009:295).

In conclusion, sources of organizational behavior include disciplines of psychology, social psychology and sociology. Contributions are based on an understanding of individual differences, those of managers, group processes and concepts such as motivation, engagement and commitment. Applications cover all aspects of human resources management and organizational development. All managers and HR specialists are influenced in the organizational management by the organizational behavior in ways that meet organizational needs, understanding of communication

types, organizational processes and skills of employees which means that the analysis and diagnosis of organizational behavior is important.

### **2.3. Management and organizational behavior**

Management (Pânzaru, 2009:2) is defined as the art of getting things done in organizations. Managers obtain, allocate and use physical and human resources to achieve goals. The definition does not include a provision on how to realize these goals. Each management style is effective in certain situations. The modern world is characterized by an increase in the diversity of values, behaviors and lifestyles. To the extent that managers will be able to understand more deeply the people, they will be able to make better decisions in areas such as recruitment, assignment of tasks, job performance evaluation, training and qualification, compensation and promotion of staff, coordinating and motivating employees, teamwork, communication within the organization, etc. To the extent that behavior can be predicted or explained, it can be controlled or managed. If they are understood by those managed, the reasons that lead to a service of high quality, of ethical behavior, they can be corrected and consciously accept the managerial act. If providing and explaining constitutes the analysis, the management is action.

Most experts in management, tried to find the right way to lead an organization in order to achieve organizational goals. Organizational behavior management systematically studies attitudes and behaviors of employees and provides the ability to understand how to manage them efficiently and effectively and how they can be changed.

The manager can have full confidence in a subordinate without the certainty that, in turn, that subordinate has the same feeling for him as leader, with his qualities and capacities. "Trust is the highest form of human motivation. It brings out all that is best in people". (Covey, 2004:56).

One of the important tasks of the manager is to motivate subordinates and to create an ambience of psychosocial leadership style, an attitude towards daily problems of people, climate, cohesion, moods up to current interpersonal relationships and the whole preparation and living arrangements , that will generate self-motivation, the strongest form of motivation (Pânzaru, 2009:36).

Knowledge of the organizational behavior help to better understand oneself and other people in a context mainly related to work. It can also extend personal potential for success in the career while the jobs becoming more dynamic, complex and interesting. To be an effective manager requires a combination of knowledge and experience. The study of organizational behavior does not produce guiding principles but rather a series of statements whose explanation depends on the situation (Schermerhorn et al., 2002:42).

### **3. Job satisfaction prerequisite for organizational performance**

Formally defined, job satisfaction is the degree to which individuals have positive or negative feelings related to the assigned work station. Job satisfaction is an attitude, an organizational behavior or an emotional response to the work tasks and at the same time to the physical and social conditions at work. At first glance, from the perspective of Herzberg's theory, some aspects of satisfaction should be motivational and lead to positive employment relations and individual performance.

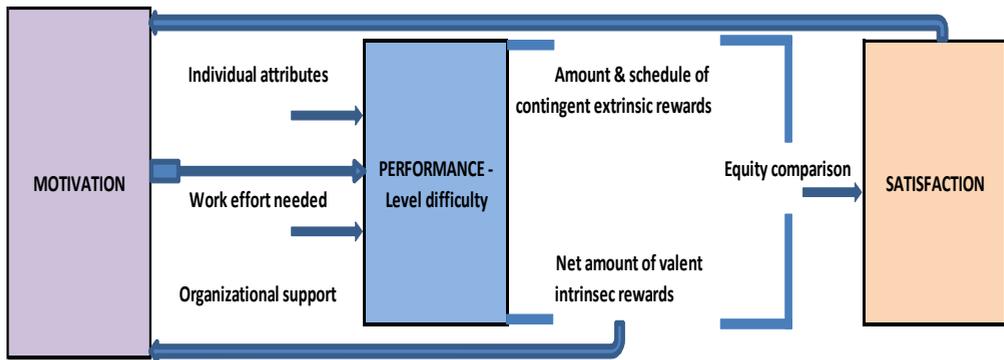
Based on daily activities managers must be able to deduct employee job satisfaction through careful observation and interpretation of what they say and do about the positions they occupy. Sometimes it is useful for levels of satisfaction of employee groups to be formally observed through interviews and questionnaires (Wymer and Carsten, 1992:71-78).

The importance of job satisfaction can be seen in the context of two decisions that people make in relation to their work. The first is the decision of belonging - to join and to stay within an organization. The second is the decision to be performing - to work to achieve high levels of performance, but not all who are part of an organization are performing.

The relationship between performance and satisfaction is still the subject of many disputes. The views are alternative: 1. satisfaction generates performance; 2. performance generates satisfaction; 3. reward generates performance and satisfaction (Greene, 1972:31):

1. **Satisfaction generates performance.** If job satisfaction causes high performance the message that managers should understand is simple: to increase work performance of employees they need to be made happy. Research shows that the relationship between individual satisfaction and performance at a time or another is not exactly straightforward and simple. There is some evidence that the relationship works better for those with high qualifications and occupy higher positions in the hierarchy. Job satisfaction alone is not considered a predictor for performance.
2. **Performance generates satisfaction.** If high levels of performance cause satisfaction the message is different. Rather than focusing attention on employee satisfaction the effort should be directed to offer them help to achieve such performance and satisfaction will follow. Research shows an empirical relationship between individual performance measured at a time and job satisfaction.
3. **Reward generates performance and satisfaction.** This last argument is the most convincing. It suggests that an appropriate allocation of rewards can positively influence the performance and the satisfaction. The key word is "appropriate". Research has shown that people who receive high rewards report high satisfaction. But at the same time it was shown that performance related rewards affect work performance of the individual. In this case the size and amount of reward varies depending on the accomplishments. As long as small rewards offered to a poorly performing employee will lead to dissatisfaction, the expectation is that he will make efforts to improve his performance to achieve greater rewards in the future. The idea is that managers must consider satisfaction and performance as two separate results but related to labor that are influenced by the allocation of rewards. Because alone, job satisfaction is not a predictor for performance, well-managed rewards can have a positive influence on satisfaction and performance.

There is an integrated model of motivation as represented in the figure below.



**Figure 2 – An integrated model of individual motivation to work.**

Source: (Schermmerhorn,2002:164)

In the figure, job performance and satisfaction are separate, but potentially interdependent with work results. Performance is influenced most directly by individual attributes such as ability and experience, organizational support such as resources and technology, and work effort—the point at which an individual’s level of motivation comes directly to bear. Individual motivation directly determines work effort, and the key to motivation is the ability to create a work setting that positively responds to individual needs and goals (Schermmerhorn,2002:165).

On organizational interdependencies that lead to obtaining work performance Sirbu said: "The human factor has always been particularly important for the activity of an enterprise" (Sirbu, 2004:1).

Individual motivation directly determines work effort and the key to this motivation is to create a work environment that responds to individual needs and goals. Regardless of the work environment motivation will depend on rewards and their perceived value. Contingent and immediate rewards are significant. Rewards that individuals deemed attractive are those perceived to have a high valence. Among them - job satisfaction as conceptual equivalent of valence that is the very activity they perform (Cole, 2002:107).

Motivation can occur when satisfaction results from extrinsic or intrinsic rewards that allocated equitably, we can specify that when inequity is resulting, satisfaction will decrease and motivation will be reduced.

Successfully motivating employees is based more on a philosophy than a management technique. Actually, it is important the kind of attitude and communication the manager has with people he leads and their reaction to those two factors.

A manager who leads by motivation needs to create conditions where people feel inspired to work hard. Clearly, a motivated workforce is essential to performance which results are particularly beneficial to the organization (Jaradat, 2007:195).

People have a common nature and basic needs that are alike, which simplifies things: members of an organization have, generally similar aspirations, desires,

hopes and goals, differing quantitatively rather than qualitatively and it's up to managers to lead them to achieve organizational goals in an efficient way. The manager of the third millennium, no longer forms subordinates but a team of fully autonomous personalities and skills that express their personality, that want to take on new responsibilities and will and can make decisions (Pintea, 2011:329).

#### **4. Research methodology**

This research is part of an applied, extensive scientific research, related to my PhD thesis which aims as an overall objective to analyze the interdependence of management, communication and organizational behavior and how internal communication in organizations influences the organizational effectiveness and efficiency or organizational performance.

The problem of personality and organizational behavior is of particular importance in modern organizations, being acclaimed on an empirical level as essential for social and professional performance of an individual. The methods of collecting and analyzing data and information were based on direct observation of organizational processes behavior and phenomena that characterize the organization as well as document analysis.

In the empirical investigation process there were analyzed and interpreted data and information already available, which were selected from a variety of bibliographic sources and are subject to a process of constant comparison and conceptual framing in order to justify the importance of the realized of this empirical study.

#### **5. Conclusions**

Communication is one of the most important activities in an organization (Harris and Nelson, 2009:67). Fundamentally, relationships grow out of communication, and operation and survival of organizations is based on effective relationships between individuals and groups.

Internal organizational communication, seen as a set of procedures and organized communication exchanges, participates in the construction of numerous definitions of problematic situations underlying the understanding and behavior of employees. Communication does not take place in a sterile and isolated environment therefore it is directly influenced by the personality of the individual / individuals that make up the organizational internal environment, in this case, the organizational behavior.

Related to the organizational behavior, we are interested, in particular, in the attitude toward work, respectively employee satisfaction and the link between it and organizational performance. Thus, through the attitude at the work place we can see how an individual reacts to typical situations described by a work task. Personality as a whole rarely offer clues about potential of performance, however proactive attitude towards work causes high levels of performance. It is not always easy to change a person's attitude about work. Attitudes towards work are only a component of the attitudes of a person. These attitudes may be linked and correlated with several other attitudes, which makes difficult for managers to change the feelings and actions of employees. However, attitudes / behavior and job satisfaction may change and sometimes that happens fairly quickly, with the events.

The organizational behavior covers a wide range of activities: knowledge and satisfaction of employee needs, understanding group dynamics, accepting and respecting the differences between people of different cultural values with which they

come into the organization and many other skills, activities and management practices.

To the extent that organizational behavior can be predicted or explained, it can be controlled or managed. Knowledge about organizational behavior helps to better understand oneself and other people in a context mainly related to work. They can also extend the personal potential for success in careers while the jobs are becoming more dynamic, complex and interesting. The study of organizational behavior doesn't produce guiding principles but rather a series of statements whose explanation depends on the situation.

In conclusion, we can state the following: knowledge of personality traits involved in work activities is necessary to determine the agreement between the person and work, how far individuals respond to the work activity, and the consequences of their deviations from rules have on work process. In the professional success there are involved a number of individual personality traits, communication styles, types of interaction and the type of organizational behavior approached, all of this putting their mark on the efficiency and productivity at work.

The success, performance and competitiveness of any organization depend largely on the content and quality of management, on the type of organizational communication / management because, as stated by many experts, the competitive advantage of an organization lies in its people.

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# THE MEASUREMENT AND EVALUATION OF THE INTERNAL COMMUNICATION PROCESS IN PROJECT MANAGEMENT

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**Abstract:** *Internal communication is among one of the most important factors for success in project management. It helps the project managers take correct decisions, implement the right strategies and finish a project on time and within budget. Measuring internal communication and keeping track of its development is a crucial asset that a manager should possess so that the project deliverables are handed out correctly. In this paper our goals are to illustrate how important internal communication is in a project and also to create an analysis model of internal communication in projects based on characteristics of communication. We developed the ICAM model based on a systemic approach with inputs – a processing box – outputs. For the inputs we used the communication characteristics data that we obtained from the questionnaires and the interviews which were later structured in a communication instance relationship. Each communication instance reflects through its attributes the characteristics of internal communication in a project. Processing this information is done by using the data mining tool called Weka. In the data processing stage classification, decision tree classification algorithms were used and also algorithms from the Naïve Bayes belief networks. Applying these algorithms in the model facilitates the interpreting and analysis of the communication characteristics in a project. The outputs of the model consist of summarized representations of the communication characteristics such as: texts, diagrams graphics, tables. These outputs of the model, as a result of the processing helps us in obtaining practical conclusions related to the improvement of project communication, for the successful completion of projects.*

*The model is a useful tool for improving the internal communication process of a project and help the project raise its efficiency. It has been created based on the characteristics of the information flow within a project. Also the Internal Communication Analysis Model – ICAM – helps improve the projects’ deliverables by making sure that everyone in the project understood their roles correctly.*

**Keywords:** project management, internal communication, modelling.

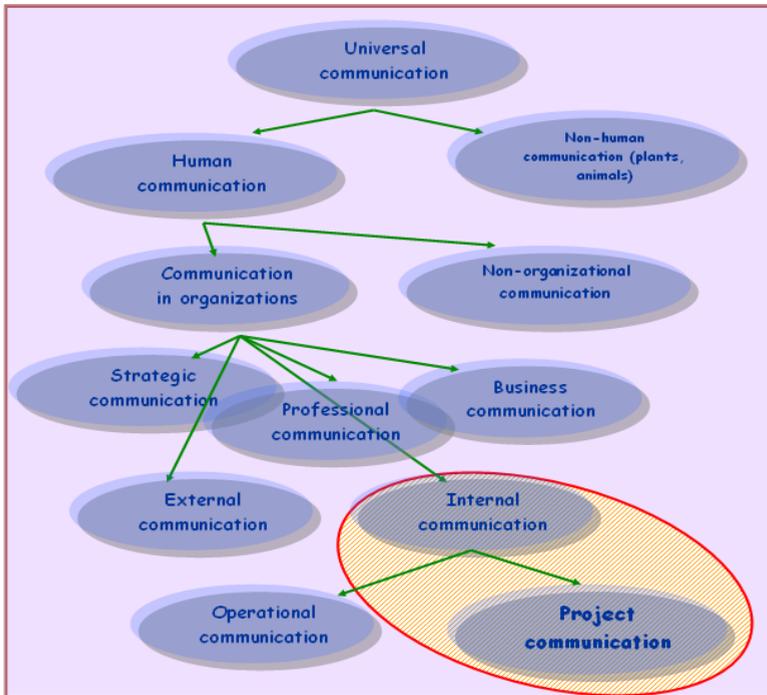
**JEL classification:** C11, C15, M14.

## **1. The communication process as a part of project management**

Communication is a central feature of the human endeavours. Being a good communicator as a project manager assures, in the end, the successful completion of the project. If the communication process is a poor one, it can lead to differences in expectations, meaning in terms of what needs to be delivered at the end of the project, people being unprepared when changes occur, not knowing in-depth information about the status of the project and team members not knowing what is

expected from them. Because the project climate is an ever-changing one, the project manager must always be up-to-date with everything that is involved in the project. Communication is the common thread that holds the project together and keeps it from falling apart. (Kliem 2008)

If attention is paid on the outcome quality of the project then a well glued together communication process must be established. Since the project manager is the leader, he is responsible for maintaining the communication flow going. The manager is the main link between the project team and the exterior of the project. So his role should be the one of a facilitator in the internal communication process. Internal communication lays the foundation of proper functioning for the entire project by promoting its identity. Also internal communication is a way to solve the need of the project members of belonging to a group and also a way of implementing managerial strategy. Studying internal communication in a project means establishing methods and techniques of organizing the communication flow in the process of project management to achieve optimal results from its activities and tasks. The inheritance of the communication characteristics is illustrated by the conceptual hierarchy in figure 1.



**Figure 1:** Communication paradigm: conceptual hierarchy.

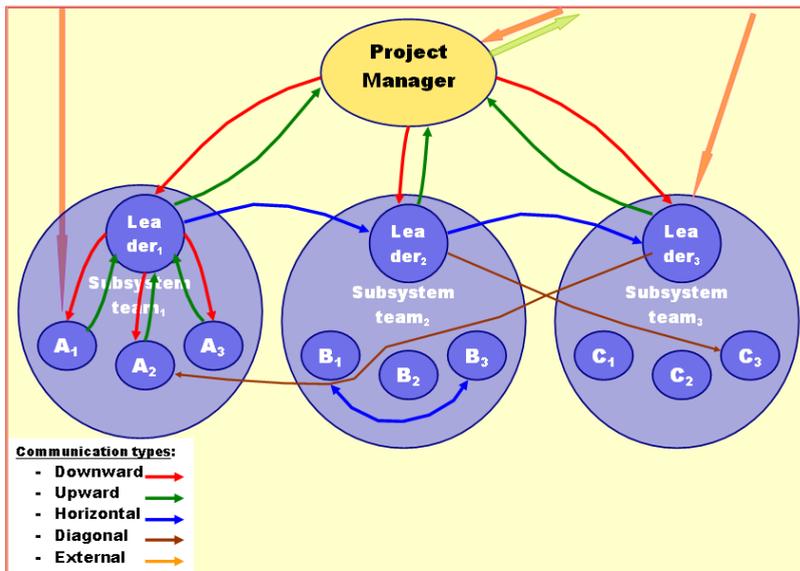
Source : Pop A-M (2013) An analysis model of the communication features in research project management.

By analyzing the work breakdown structure of the project we can determine the direction of the communication flow among the components of the project. Usually there are five ways in which information can flow in a project: top-down, down-top, horizontal, on diagonal and with the exterior. (Kerzner 2010)

Information flowing from top to bottom is part of the communication that takes place between management (the manager) to team members. This communication flow is used by managers to convey information to the team member about work. Team members need this information in order to complete their tasks successfully. The down-top flow of communication serves the following purposes:

- Gives feedback on performance from team members.
- Provides instructions for correctly performing the project tasks.
- It communicates the mission and the vision of the project to the team members.

It provides detailed and complete information about the team members' job description.



**Figure 2.** Information flow in a project

Source: Pop A-M. (2012) 2-th Report of Doctoral theses Contributions towards communication management in projects, Sibiu, Romania, November, 2012.

The communication flow from team members to managers is called „down-top” communication. This flow provides feedback on how well the project is evolving and also through this type of flow, members can express their own views and report their performances to their managers. A „down-top” communication that works well allows the team members to participate in the decision-making process and can create much better communication channels between the two parties.

Internal communication analysis is also directly influenced by the development model of the project. There are several approaches to the development model of a project. Figure 3 illustrates the main approaches used most often in project management.

The approach based on the life cycle phases includes project tracking and communication in this type of model is maintained at an average level. As the models become more and more complex, the internal communication process becomes increasingly more pronounced because their steps requires closer collaboration

between project members. The highest level in internal communication is achieved in the agile model. This is because the very essence of this model is the existence of a strong communication process between team members.

For a very thorough analysis of internal communication we can establish different classifications based on criteria chosen in relation with the characteristics of internal communication. (Stoica 2011)

This classification of internal communication in project management provides a relevant ranking of its characteristics, which will be analysed using a model presented in section three of this paper.

	<i>Phased</i>	<i>Iterative</i>	<i>Incremental</i>	<i>Agile</i>
<i>Methodological characteristics</i>	A traditional phased approach identifies a sequence of steps. Typical development phases: initiation, planning and design, execution and construction, monitoring and controlling systems, completion. Some projects do not follow a structured planning and/or monitoring process, and some projects will go steps 2, 3 and 4 multiple times.	Is a repeatable, practical and proactive methodology that ensures project success while decreasing an organization's negative environmental impact. The methodology encompasses the management, control and organization of a project with consideration and emphasis beyond the project life-cycle and on the five aspects of sustainability.	Is a methodology of planning and managing project execution designed to deal with uncertainties inherent in managing projects, while taking into consideration limited availability of resources (physical, human skills, as well as management & support capacity) needed to execute projects. In multi-project environments, resource should be performed across projects.	Agile project management approaches based on the principles of human interaction management are founded on a process view of human collaboration and a strong communication.
<i>Methods</i>	PRINCE 2	PRISM	CCPM	Agile family
<i>Model</i>	Waterfall,	Spiral	CCPM	Lean model

**Figure 3.** Project management development models.

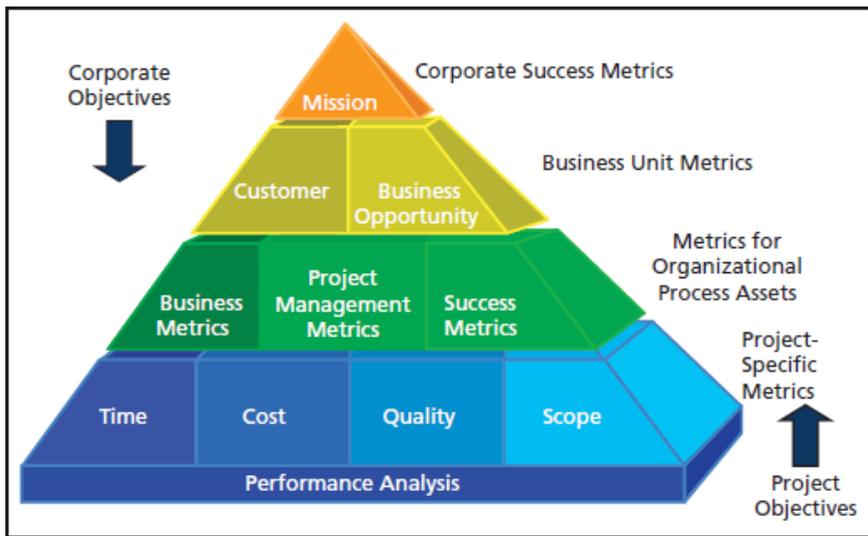
## 2. Methods of measuring internal communication in projects

Finding the right methods for project communication is a challenge for the project manager. Project metrics have the role of informing both the stakeholders and the project members on the status of the project throughout its development. Also based on metrics, the project manager may determine the validity or invalidity of an action that must be undertaken (Kerzner 2011). Measuring communication is a fairly new concept with which managers increase efficiency in a project and cause a positive result. The complexity of the communication process in a project cannot be fully understood unless the process is measured one way or another. Therefore, if there are ways to measure communication in a project this confirms that an active communication process exists in that project. Metrics can be used for tracking performance even related to the organization's objectives, as shown in figure 4.

One method of measuring the communication process is the chosen by Angela Sinickas. As far as communication within organisations is concerned, one of the most used methods of evaluating communication performance is calculating the Return of Investment (ROI). The formula used for this is the ratio between gain minus cost and cost:

$$ROI = \frac{Gain - Cost}{Cost} \quad (1)$$

Sinickas argues that the Return of Investment method (1) can also be used in projects for measuring the communication process. In order to receive an accurate information about the ROI in communication we must divide the communication cost to the net value and the result is an approximation of the ROI. With the help of surveys, the project manager, who is the communication facilitator, can track down what impact different communications has on project members decisions with a cost impact on the project itself. When calculating the ROI in communication, the difficult part is finding out what is the role of communication in helping the project to reach the desired outcome (Sinickas, 2007).



**Figure 4.** The debriefing pyramid.  
Source: Kerzner, 2011.

To prepare the questionnaires and interviews we used the classification summaries of the communication characteristics presented in the first section. Formulating the questions from the interviews and questionnaires was based on several rules to ensure that the answers are directly related to the problem in question. We formulated the questions based on two principles enunciated by the communications expert Angela Sinickas (Sinickas, 2007):

- Questions must be raised to the point and ambiguous questions are to be avoided.
- We must use questions whose answers are more detailed so that the questionnaire is relevant to the sample studied.

In gathering the information that best describes the communication features in project we took into account the Likert scale with five gradations to express the intensity of the staff's agreement.(Jamieson 2004). In order to capture the information as faithfully as possible we determined that the five nominal graded responses on the Likert scale will be: Never, Seldom, Sometimes, Often, Always.

These nominal values that we obtained will be discretized on a numeric scale from 1 to 5. A reliable interpretation of the data accuracy will be done by using the Weka analysis tool and several classification and clustering algorithms from Machine Learning. In order to process the information at a performance level several abstract models will be created which will serve for efficient analyzes and interpretations in communications management within projects. In this paper we present a model designed for the analysis and interpretation of the communication characteristics based on the criteria called „communication flow in a project”.

The data collection methods used were the questionnaires and the interviews. Then data is entered on spreadsheets which will be later summarized on communication characteristic categories and coded so that they can be pre-processed with the Weka tool (Weka-3.7.8 2013).

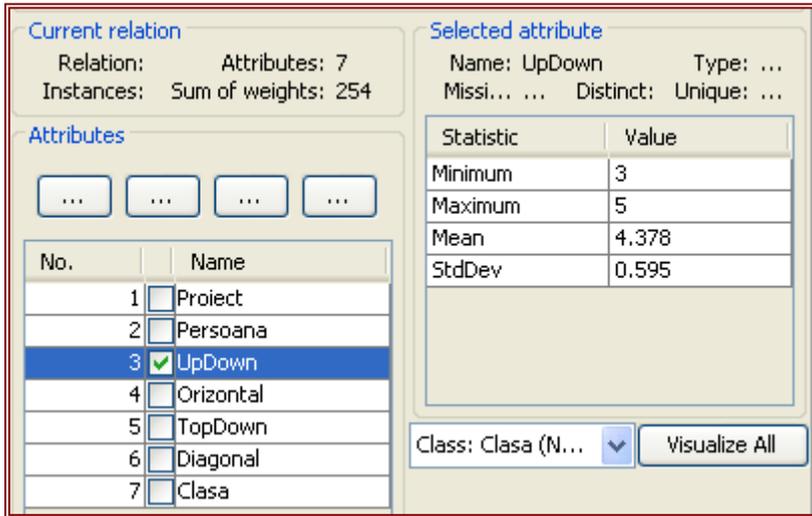
### 3. A model of analysing internal communication in projects

The Internal Communication Analysis Model (ICAM - Internal Communication Analysis Model) was created with the help of the data mining development tool Weka from Waikato University in Prinston, New Zeland. Once the data measured in internal communication was collected from all the 96 projects, it was structured as input data for the ICAM model in a communication relation which includes 254 communication instances. In the structure of this relation, 7 attributes of communication were selected for the analysis which express the same number of communication features from the research project surveyed in universities and research organizations. The criteria followed in analysing internal communication in projects was the one that expresses „the communication flow in projects”. Table 1 presents these features together with the values that were surveyed.

**Table 1.** Communication stream characteristics.

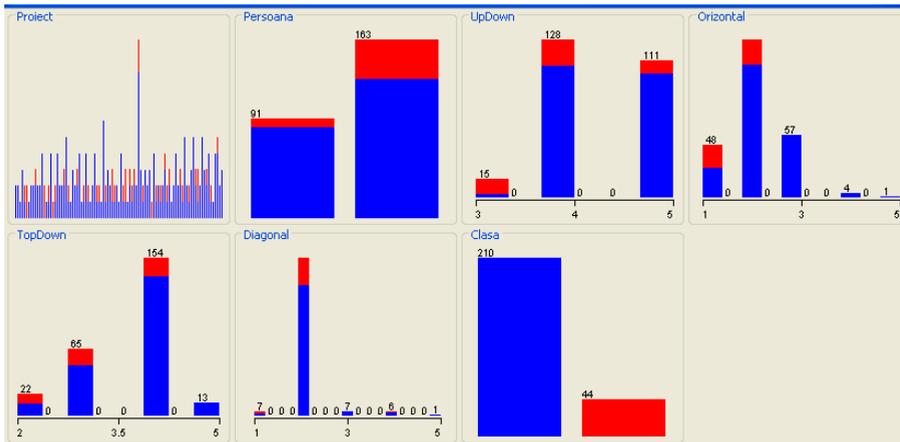
Code	Characteritics	Probabilistic Values
<b>Fl</b>	Communication stream	Likert Scale: Nominal = (Always, Frequently, Sometimes, Rarely, Never) Numeric = (5, 4, 3, 2, 1)
<b>Flsj</b>	TopDown	
<b>Fljs</b>	UpDown	
<b>Flo</b>	Horizontal	
<b>Flt</b>	Transversal	

The seven input attributes for the ICAM model are presented in figure 5. Here we have an attribute that identifies the project investigated „Pnn”, where nn=number of the project. The attribute „Person” has two nominal values: Manager and Member (team member or stakeholder or an expert). The TopDown, UpDown, Horizontal and Transversal attributes express the direction and the way of the communication process in a project and their values were numerically discretized to the {1, 2, 3, 4, 5} set. The last communication attribute is called Class and its role is to help the model clarify internal communication. It has the nominal values {yes, no} where the yes values is assigned to an instance if the average number of communication numeric values is more than 3. If not the value of the class is no. Figure 5 illustrates statistical values for the 7 communication attributes (minimum, maximum, average, standard deviation).



**Figure 5.** Statistical values for 7 communication attributes  
 Source: MIFC Application in Weka-3.7.8 (2013).

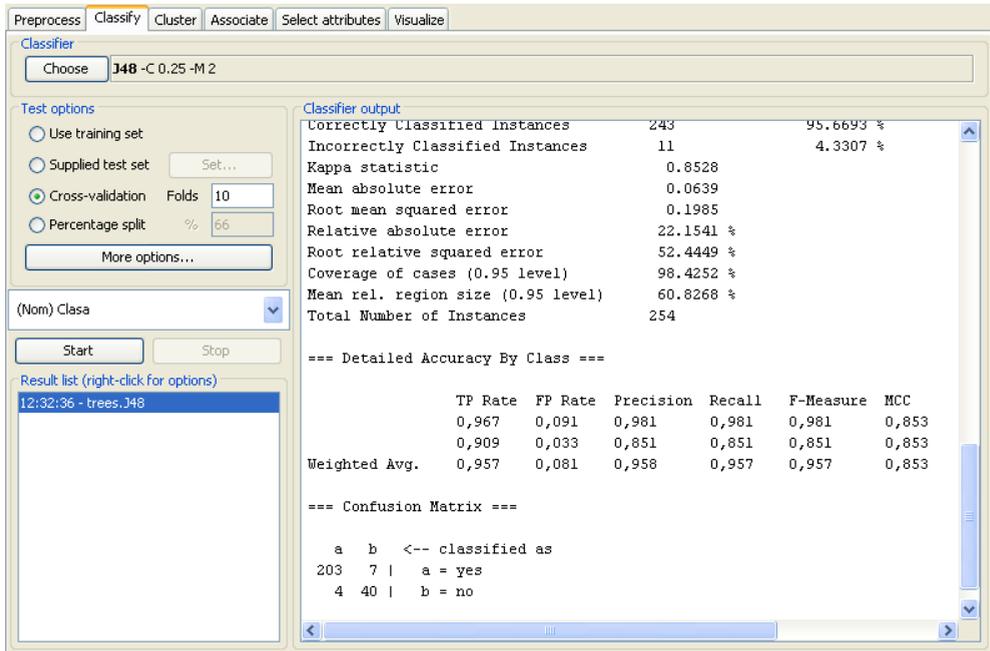
Figure 6 presents graphically the pre-processed statistics of the communication instances from ICAM input relation.



**Figure 6.** Statistic graphics of the internal communication.  
 Source: MIFC Application in Weka-3.7.8 (2013).

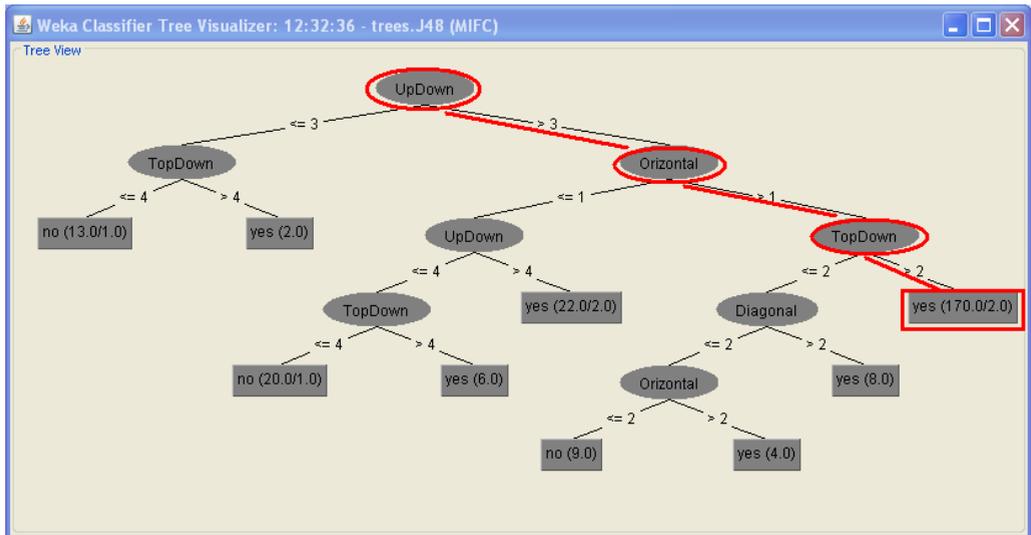
The ICAM model has various classifications for the communication characteristics which are applied by various algorithmic methods in Machine Learning. For example in figure 7 we have a textual result of a classification instance after using the J48 „Decision Tree” method. In the text resulting from this classification we presented some statistics regarding the correctness and the accuracy of the communication characteristics classification. Also, here, we presented the „Confusion Matrix” with numerical elements which indicates the number of THRU communication instances

on diagonal (for example, an instance is „a” and it was predicted as being „a”). The other elements are false.



**Figure 7.** The textual result of the J48 classification  
Source: MIFC Application in Weka-3.7.8 (2013)

Figure 8 illustrates the decision diagram resulting from the communication instances classification with the help of the J48 algorithm. From this classification tree we can highlight several decision rules in the communication flow. The most powerful classification rule of the communication characteristics is marked with red in the diagram from figure 8. This route has as a starting point the attribute node „UpDown” and follows the decision test „Valoare comunicare” > 3, which leads to the Horizontal attribute node, then passes through the decision test „Valoare comunicare” > 1 which leads to the attribute node TopDown. Further, passing through the „Valoare comunicare” > 2 test we reach a final communication characteristics class with 170 classified instances, from which 2 are incorrectly classified here. By interpreting this route in classifying communication instances we can say that this rule is the most efficient way in which we can use the communication characteristics of project management. The other routes from the classification tree are less important for this model, but maybe in another context we can identify other relevant routes for the characteristics of internal communication.



**Figure 8.** The decision tree diagram in the J48 classification of the communication characteristics.

Source: MIFC Application in Weka-3.7.8 (2013)

#### 4 Conclusions

Measuring internal communication helps in quantifying, analysing and evaluating its value for a more efficient management of the project's tasks. Also by analysing the communication process project managers and project portfolio managers can effectively manage the projects' resources.

The ICAM model is a useful tool for performing retrospective analyses of the characteristics of internal communication. With the help of this model we can obtain several interpretations of the characteristics of project communications which help improve the communication process and also the project management process.

The model has the possibility to provide a consistent series of communication analysis tools through different classifications and clustering of the communication instances. The deliverables obtained after applying the model on the questioned data can be presented as graphics, diagrams and statistic summaries that establish the accuracy and efficiency of internal communication in projects.

#### Acknowledgements

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## NEW PERSPECTIVES ON STRATEGIC MANAGEMENT PROCESS

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**Abstract:** *For developing economies the development of enterprises should be a strategic goal, this way of thinking may become viable only as a result of a combination of judicious analysis based on specific local economic aspects and a set of actions to correct any slippage or amplify existing development trends taken by the managers. A better leadership would unequivocally lead to a better strategy but sometimes the lack of information, first about the external environment, continuously undergoing quick and radical changes, the political problems and the complexity of the implementation of the strategy or the costs that it implies are not taken into consideration. Therefore managers have two options: to establish strategies, which would lead to the achievement of the objectives; evaluate them on the basis of economic efficiency or to identify an already existent strategy and to adapt it to the environment changes in which the enterprise carries on its activity. This paper aims at discussing and explaining from a theoretical perspective, the evolution and the advantages and disadvantages of the strategic management process, in order to convey the managers a modality to achieve competitiveness and evaluate the position of the firm. In the first section, we explain the the necessity of strategic management process. In the second section we present the different evolution stages. The third section presents our conclusions regarding the advantages and disadvantages of the strategic management process, fundamental for the strategy success. The financial crisis did affect the Romanian economy and Romanian enterprises early in 2009 registering an impact of the crisis identified in the need of the managers to rethink their strategies, to improve their management skills and perspectives on the role of the employees after the crisis. In this paper we try to underline the evolution stages of the strategic management process with its own characteristics by which both Romanian or foreign managers can evaluate the position of their enterprise and can take improvement measures, which may help sustain or gain competitiveness that has been affected by the crisis.*

**Keywords:** strategies, strategic management process, manager, strategic planning, development, performance

**JEL classification:** L1, M11, C41

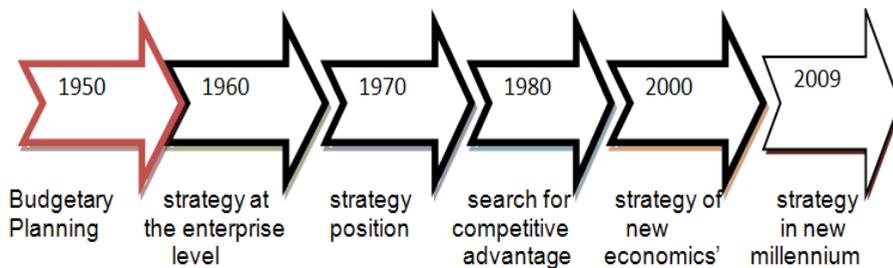
## 1. Introduction

With the works of Meyer and Heppard, McGrath and MacMillan, in 2000 began the integration of two research fields and namely that of entrepreneurship and strategic management. This integration appears as a necessity because the entrepreneurs needed a more rigorous perspective over their strategic planning for the purpose of profiting well from market opportunities under conditions of uncertainty (Kraus, Kauranen & Reschke, 2011:59). Just at the beginning of 80s two prolific authors in the field, Schendel and Hofer argued that strategic management can be seen as a process. It is interesting that this process relied on the entrepreneurial work which is in any enterprise and it is aiming to adapt the enterprise` s operations with the necessity of its development and renewal; but we will discuss these in the next chapter. That is why we will observe the use of strategic management concepts at entrepreneurship level in the specialized literature (Covin & Slevin, 1991).

## 2. The evolution of strategic management

Paitsch condenses this evolutionary process into four phases. Phase 1 contains financial planning which was focused on the enterprise budgets achieved annually. The operative control was aiming to improve the economic result by combining efficiently the production factors (Peitsch, 2005:48). Grant positions this phase between 50s and 60s. Wheelen and Hunger consider this phase contains a basic financial planning, in which information focuses on the ideas provided by the sales department requiring sometimes much time on gathering useful information, and the planning horizon is usually 1 year (Wheelen and Hunger, 2010:5).

Passing to a new phase, the second one, is called forecast-based planning (Istocescu, 2005:66), the managers relied on the budgets from different years and on the environment analysis to achieve allotting the resources. The economic forecast from the 60s was on short-term, the planning within the enterprise being formal; it desired diversification and synergy achievement by creating special departments for planning (Grant, 2010:17). The planning horizon is this time longer, namely from three to five years because the managers already take into consideration projects that last more than a year (Wheelen & Hunger, 2010:5).



**Figure 1:** The evolution of strategic management

Source: Grant, 2010:17

In the third phase the planning is the outcome of more careful analysis of competitive environment and was as a response to the speed-up in technical changes and different circumstantial cycles, the implementation and control being considered as subsidiary activities (Peitsch, 2005:48). At the same time the different strategic alternatives are taken into consideration, they were emphasized by the achievement of strategic portfolio, of PIMS analysis that was aimed at evaluating the changes that appeared in competitive position of the enterprise or introducing market segmentation strategies. Being dissatisfied with what they have done so far with the achieved planning, the managers call on consultants; they can offer sophisticated and innovative techniques (Wheelen & Hunger, 2010:5). It can be understood why in this period appears two specialized magazines as: "Strategic management Journal" and "Journal of Business Strategy".

In the 1990s the strategic management triggers a search for the achievement of a competitive advantage by using the resources and competencies, the maximization of the shareholders' s value, reorganization and alliances. The managers' suggestions and engagement from the lowest level is invaluable even if it is not aiming to forecast in the future but especially to achieve urgent strategies for probable scenarios (Wheelen & Hunger, 2010:6). Strategic innovation, new business models and destructive technologies introduced as a notion by Clayton M. Christensen, professor from Harvard Business School to emphasize the new innovations, are defining elements of the strategy for the New Economics considered as being the third industrial revolution. The new millennium which marks the fourth phase is characterized by a strategic management which relies on CSR and ethics in business, the achievement of standards and the application of global strategies (Grant, 2010:17). Thus the new directions of strategic management can be summed-up beginning with the year 2000, period in which only a certitude remained namely that some economies even thriving, have a quite raised indebted level for a peace period (Grant, 2010:457). General Electric can be regarded as an enterprise which fulfilled successfully the pioneer role of strategic management passing through all these phases in the 80s (Wheelen & Hunger, 2010:6).

The main stages of strategic management process are the formulation, implementation and evaluation of the strategy (Barney, Hesterly & Hesterly, 2010:6). Understood as a process, the strategic management is thus a series of stages which do not necessarily present a linear sequence but it rather points out certain interdependences between stages and according to Japanese models they overlap (Raps, 2008:24). These stages start from the formulation of strategy, then contain all the concrete actions to achieve it and they develop until the final evaluation. Although in the case in which the outcome of this process is excellent, it is important that the companies are not satisfied with (David, 2011:288).

The evaluation phase is the end of the strategy process and at the same time it is also the basis for the next stages (Barney, Hesterly & Hesterly, 2010:6). The distinction between them is made more in didactic and analytical aim (Raps, 2008:15). The evaluation consists of a process to question all decisions at all the levels within the enterprise. It can be extremely risky to wait to the end of the year to achieve this stage (David, 2011:290). The stages proposed by Barney, Hesterly and Hesterly will be discussed further on.

An alternative to this classification presented above is offered for example by Welge and Al-lea Laham (2008: 185-187) and by Borza et al. (2009). These authors consider

that the next phases represent the basic components of the strategic management process: the planning of strategic objectives, the strategic analysis of external environment and of the enterprise and prognosis, strategy elaboration and its evaluation, the implementation of the strategy and its control.

Strategy formulation, according to Popa must be rigorous, (Popa, 2004: 60) contains first the development of a vision and mission. It is equally important to identify the opportunities or the dangers from the enterprise external environment as well as to establish the strong and weak internal points (Barney, Hesterly & Hesterly, 2010:6). We identify a similitude with the SWOT analysis. Although, according to Grant this model is very widespread, the classification in four determinant factors of an enterprise strategy is not quite correct. The first two categories characterize the external environment and the other the internal environment (Ilieş et al., 2005:99). Grant questions the division of internal factors in strong and weak points giving Steve Jobs as example, the founder of Apple who suffers pancreas cancer. Taking these aspects into consideration, the question that can be put is how Steve Jobs can be viewed as a strong point of the company or a weak one? Another example would be the effects that global warming has over the auto industry. It can encourage the states government to raise taxes supporting public transport and disadvantaging private transport but on the other hand enabling the apparition of new types of car (Grant, 2010:12). The central elements would be fixing the enterprise long-term objectives and also offering alternative strategies from which the enterprise benefits a lot. The concepts about strategy start from the presupposition that the formulation of strategy is ambiguous, it must be changed into a precise idea about how to redirect the organizational conduct (Jäger, & Beye, 2010:97).

The formulation of strategy as a starting point for strategic management (Kaplan & Norton, 2004:5) approaches problems as to enter the international market, to allocate favourably the limited resources, to analyze the potential mergers or formation of joint venture and sometimes even to avoid an hostile taking- over. Having the best perspective over the enterprise, the manager is the only one who has the authority and capacity to evaluate the consequences and the major ramifications that any strategic decision might have.

According to Hart there are five typologies for the formulation of strategy identifying different models used at many management levels. Within the authoritative model, the formulation is made by a strong leader supported by a few from his top managers. The others within the enterprise are only good "soldiers", merely executors. The enterprise environment is not complicated and the organizational structure must be simple to enable keeping an efficient control (Brown, 2004:213).

There are three kinds of programmes for strategy implementation (Lynch, 2009:492). The complex implementation programmes are used when the enterprise must achieve major changes in the strategic direction that must be followed. A tight coordination is essential to succeed in leading by new strategies, because surely they will confront with a serious resistance. If for example the environment in which the enterprise carries its activity is uncertain or the research results are doubtful, then the gradual implementation programmes will be used. In this case the strategic approach is flexible, the calendars, tasks and even the objectives can be changed in compliance with the current events; it may be even the possibility of leaving aside some strategic fields. In case in which after an analysis it reaches to the conclusion that none of the two types of implementation mentioned above is the best way to

follow, then programmes for selective implementation will be applied in which only a major programme is elaborated but only in certain fields.

According to the traditional approach of strategic management the formulation of strategy relies exclusively on situational analysis of external and internal environment (Grant, 2010:26) being in our view rather a consequence of this. Resources-based vision implies a careful analysis of the enterprises resources and abilities. In contrast, according to stakeholders vision the formulation of strategy must be achieved in compliance with those rights and expectancies (Bordean, 2010:14).

The next stage approaches the way in which the strategy is implemented and includes the development of organizational cultures and it is aiming to support the strategy by organizational structure, redirecting marketing efforts, the preparation of the budgets, the development and use of informatics systems and the correlation of compensation system with the organizational performance (Barney, Hesterly & Hesterly, 2010:6). According to Popa the implementation must be systematic and effective (Popa, 2004:60) because it is aiming to change an already existent stage in a desired one (Raps, 2008:27). Two distinct models emerge in the specialized literature to examine the implementation of strategy: descriptive models which only present the process and activities-based models namely how the process of implementation ought to be proceeded (Tapinos, Dyson, & Meadows, 2008:3).

The dynamics renders well the main feature of this stage because the employees mobilization is needed to implement an already established strategy and discipline, engagement, sacrifice is also needed. Thus, in our view strategies that cannot be implemented is not viable and according to Lynch not even the paper in which it was written values (Lynch, 2009:13). The difficulty of this stage is the attempt to implement, to put into practice a new idea in a system which already is within the enterprise (Raps, 2008:27). Thus the specialized literature concerns more to discover why the implementation was successful in one organization and in the other was not.

In Germany the implementation stage fell into place at the same time with the evolution of information systems simultaneously emphasizing the necessity to introduce new rules within the enterprise (Raps, 2008:27). Implementing the strategy could be more important than selecting it to explain the effect over the performance (Leitner & Güldeberg, 2010:176).

Concerning the importance of the link between strategy and its implementation, this was synthesized by Raps after studying many authors from the field in the following table. If for example the quality of strategy implementation is as inferior as the strategy then the outcome will be unequivocally a completely failure. If the strategy is very good and its implementation leaves much to be desired, then for the enterprise will be unfortunately a failed chance.

**Table 1:** The importance of link between strategy and its implementation

Strategy	of inferior quality	of superior quality
the implementation of an inferior quality strategy	failure	a failed chance
The implementation of a superior quality strategy	preventable danger	successful

Source: Raps, 2008:27

The final stage of the strategic management process is the evaluation of the strategy by which the validity of a strategy is tested and then modified due to the ongoing changes of the enterprise environment. There are three elementary strategies of evaluation: the re-evaluation of internal and external factors which were the basis for the present strategies, the measuring of the performances and taking corrective actions. The re-evaluation is necessary because a strategy which now is successful, it may not be successful in the future. All the three stages of the strategic management process will be implemented on all the enterprise hierarchical levels. In this way the communication and interaction of all those implied has a vital role (Lynch, 2009:13). Pettigrew and Whipp` researches pointed out the formulation and implementation of strategy must not be viewed as two distinct stages and rather as being part of an ongoing experimental and repetitive process (Lynch, 2009:493). Although this should be the tendency towards the managers ought to turn their attention many times there are major differences between what have been formulated and what was really implemented. Norton and Russel identified a solution to this problem by introducing "a strategic management office", three primary functions of this would be the achievement of strategic management framework that will contain the leadership convention and the proper process. The second function is to appoint the responsible person for this whole strategic and essential process of reference to the stage of its implementation. The third function is that of coordinator or consultant together with other departments such as the IT assuring the operation (Norton & Russel, 2011:8). The process of strategy revision must be redefined annually, Norton being one of the prolific authors in this field. Norton proposed six stages of strategic management process. The first stage contains the development of strategy; it contains a clear formulation of the enterprise vision. In the second stage the strategy is expressed from a more general form to specific objectives, initiatives and budgets and the quantification passes from strategy to action (Norton, 2010:3).

An alignment of the organization is in the third stage. By this it can be understood the achievement of an ongoing adjustment between strategy and objectives at department level. This alignment must take place not only internally but also externally with the enterprise partners and clients. The fourth stage links strategy and operations. If, for example, the next strategic objective establishes a diminution of the cycle of a product development by 50%, it cannot be achieved if someone does not realize how to reorganize the product development process. The strategic management process is increasingly decentralized, it is recognized the fact that the planning must be at the lowest levels. So did Dusney, allotting this process to the division. It must be emphasized this process is one of learning, helping, educating and supporting and it truly has positive effects over the enterprise performance (David, 2011:16). We could not affirm that in reality within the enterprises this strategic management process is as clearly divided and its development takes place in the arrangement proposed by diverse authors. Many enterprises organize formal meetings to discuss again the vision, mission, strategies, performance, objectives and the politics encouraging the creativity of its own employees because without communication and appropriate feedback this process cannot work at optimum parameters (David, 2011: 16).

### 3. Conclusions

The advantages of the strategic management application within the enterprises are summed up offering new clearer visions over the enterprise and a clearer focus over what it is important from a strategic point of view (Wheelen & Hunger, 2010:6). But David offers new perspectives. In his opinion the communication is improved by an ongoing dialogue and a participation of the employees at taking decisions. By profound understanding he refers to both the opinions of the others and the enterprise situation and also to the reason for which it is planned. A bigger engagement is absolutely necessary to achieve the objectives, to implement the strategies and an assiduous work. The expected outcome is that both the managers and employees have as a task the enterprise success (David, 2011:16) receiving an award for this. It must also be mentioned the positive psychological impact by reducing the conflicts from the enterprise interior due to satisfy the need of stability of each individual by planning of the future (Popa, 2002:45).

Other advantages would sum up to a systematization of the most important decisions that would facilitate the managers attempt to improve developing them simultaneously the thinking regarding the management and the development of managerial attitudes (Popa, 2002:46).

The disadvantages of strategic management can be reflected by an obvious feature, according to our opinion, and namely that it is an expensive process either we measure it from a financial point of view by using market analyses, special software programs or the need of appellation at a consulting firm; from the work force point of view because the specialization in different fields and its reallocation will have to take place, sometimes even its excessive solicitation; from the time allotted point of view (Istocescu, 2005:48) because for example an owner will have to look after not only the daily activities but also the strategic ones; from human or psychological point of view because the strategy formulation, implementation and control does not sum up only to follow some steps and to know the enterprise internal and external resources but also to admit your own limitations or drawbacks and to know when it is the moment to withdraw or to delegate or to ask help of a third person.

A consensus within the strategic management hardly can be reached (Nag, Hambrick & Chen, 2007:935), because it includes fields such as the sociology, psychology and economics (Mazzarol & Reboud, 2009:150). We can however affirm the academic environment had a serious contribution in providing many ways of thinking over the strategy and implicitly over strategic management. But we think that the collaboration with the business environment was extremely profitable, more than in any other field, the contribution being unquestionable because it led to the evolution of methods to implement the strategy.

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# CLUSTER POLICIES IN THE EUROPEAN UNION – ENGINES FOR SUSTAINABLE ECONOMIC DEVELOPMENT AND COMPETITIVENESS

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**Abstract:** *The present article wishes to present the topic of clusters and cluster policies, to highlight their status and role in the European Union and to underline their significant purpose in obtaining a sustainable economic development, and in making a more competitive and well oiled Europe. The research for this article is part of a greater goal – that of getting the answer to the question: What are clusters what and how can “they” better the performance of the regions that are part of the member states of the European Union? To do that, an inquiry into the issue was necessary, by analyzing information from multiple data sources and by drawing some conclusions, based on those informations. The conducted research was empirical, and in order to better highlight the relationship between clusters, cluster policies and economic development, a synthesis of different case studies and statistical data were used. The conclusion that was found was that strong cluster portfolios are related to (and thrive in) developed countries, but interestingly enough, relationship can also be reversed (meaning that clusters cause the region they exist in to increase its performance). Also, clusters are highly prevalent from a geographical point of view, the existence of which can be seen globally, of course in different stages of development. And last, but not least, from the standpoint of national cluster policies, although all countries have programs for clusters either at national or regional level, which varies from country to country is the number and type of ministries that are responsible for implementing cluster policies. Also another factor that varies is the importance given to cluster policies. However an issue that is becoming increasingly clear is that the cluster policy is becoming more important and relevant. Therefore, the hypothesis was confirmed, there is a direct correlation between clusters, cluster policies and sustainable economic development and competitiveness.*

**Keywords:** *clusters, cluster policies, economic development, European Community instruments*

**JEL classification:** *F63, O1, I15*

## **1. Introduction**

In recent years the clusters based concepts have been used increasingly more often as a tool to strengthen regional economies.

Many Europeans are concerned that their levels of prosperity, productivity and innovation can not keep up with those from the U.S., but also with competitors from other parts of the world, including Asia. The fact that the European regions have clusters and cluster portfolios weaker than other regions outside Europe, could be an important factor that will pull Europe back when it comes to global competition.

European regions have seen an improvement in overall economic performance, due to the presence of strong portfolio of clusters and this is accentuated in some regions by supporting cluster development policies by the European Commission in the European Member States, but also at national and regional level within individual countries.

### **1.1. Background**

As the current EU countries were integrated, they tried to develop plans and strategies that have the common interest issues related to globalization of trade, sustainable regional and social development, interests in areas such as research, innovation, economic growth and of jobs, heavily tested by the economic and financial crisis.

All of the EU legal frameworks aimed at facilitating a social and economic environment favorable to the requirements of its citizens in order to transition well over imminent challenges of the present context - as well as the main objective being sustainable economic development, and competitiveness.

Through the global crisis, economic and industrial zones have been relocated and consequently jobs were disrupted. Although Europe concentrates on her vital area, it is also facing many of the effects of globalization (outside areas of military conflict, epidemics, outbreaks of riots, famine, the dynamic economy of the Asian market), taking into consideration the essentiality of improving its competitiveness. A real challenge is really the adaptation of Member States - especially of the latest ones, on the go to these challenges. To these, also contributes sustainable economic development plans for individual countries; supporting and developing clusters being able to assist in this regard.

Through the integration of as many countries of the European continent, in the European Union began to appear new challenges in many areas. The complexity of these new challenges is amplified by a large and diverse range of economic, social and political issues that EU economies have been based on. By establishing joint strategies at all levels, the EU must take into account a bonding and a versatile strategic partnership both with Russia, China, USA and other countries around the world, this having an important role on the global stage.

### **1.2. Theoretical framework**

Clusters are part of a broader conceptual framework of understanding, respectively as influencing factors (stimulus) of regional and national competitiveness. This framework was developed by Michael E. Porter (1990) in his book "The Competitive Advantage of Nations". According to M. Porter environments for growing and innovative clusters are usually led by a strong "diamond", which includes:

- intense local rivalry - including famous battles that stimulates continuous improvement that creates a more advanced and diverse base of suppliers;
- Dynamic Competition - arising from the entry of new firms;
- intense cooperation - collaboration organized by various institutions, such as professional organizations, chambers of commerce, cluster initiatives; (Solvell et. al., 2003)
- Access to more specialized and advanced production factors (human capital, financial capital, infrastructure) and for more clusters, links with

- universities and public and private research institutions;
- Links to related industries, sharing talents and new common technological advances;
- Proximity to sophisticated customers and with needs.

Among the important terms related to the support and help of clusters are to be found:

- Politics - strategic intentions of a government, listed in a certain document, must set the political objectives and provide reasons why these activities are important in that direction.
- Schedule - switching from intention to action, involving allocation of funds, creating organizational responsibilities and defining the specific conditions under which funding is available.
- Implementing Agency (government agency or ministry) - is responsible for the program implementation

There are 3 types of cluster policies. Cluster development policy - directed towards the creation, mobilization and empowerment (strengthening) of a given cluster (e.g. national funding competition for the best strategies for "life science" clusters). These are actual cluster policies. Policies for clusters influencing - use a cluster to increase the efficiency of a particular instrument (traditional) (OECD, 2007). These are represented by industrial policies, SME policies, innovation and research policies or regional policies.

## **2. Cluster development strategies, projects and policies in the European Union**

EU-10 - the countries which joined on 1 May 2004 - differs in a large proportion from the EU-15 and EU-27 in terms of multiple factors related to business conditions. Instead, all were affected by barriers at the efficient geographic allocation of economic activities.

„To improve the innovative capacity of Europe, in particular, will not be sufficient for more resources for science and for research and development; there is a need to focus on the microeconomic capacity of European regions: the quality and specialization of factor conditions, demand sophistication, quality corporate strategies and entrepreneurship, and the presence and depth of clusters. These qualities of the business environment enable the transformation of specific knowledge into products and services and competitive companies.” (European Communities, 2006)

Most EU Member States have specific measures of clusters or cluster programs developed at national and / or regional level, which are essential elements of national and regional strategies to support innovation.

„Examples of successful clusters such as Silicon Valley, raised political interest regarding clusters and accelerated the desire to replicate in other regions (to stimulate economic growth, foster innovation and make the region more internationally competitive)” (European Commission, 2008).

The European Commission embraces the development of clusters and cluster policy as the main factor to improve clusters competitiveness in Europe. The objectives of the European Commission:

- A better design for cluster policies at national / European level
- Strengthening cluster initiatives more effectively and exchange of

knowledge

- Better access of knowledge through cooperation at trans-national cluster level.

European Cluster Alliance (ECA) is an open platform that protects trans-national cooperation between policy makers for improving cluster policies for the benefit of companies and other stakeholders connect. This is managed by TACTICS INNO-Net Project.

„Europe INNOVA Initiative” – under the „Competitiveness and Innovation Programme” – CIP – Europe INNOVA initiative of the Competitiveness and Innovation Programme is focused mainly on the joint development, of better and new tools, that can be used by cluster organizations to support innovative SMEs, and therefore to improve the Service Support of clusters in Europe. This initiative has helped to increase business ties between clusters in Europe by organizing cluster visiting schemes and "coupling" events and preparing partnership agreements for creating sectoral platforms for business opened to cluster. (I „Europe INNOVA Innovation and Clusters: The experience of Networks”, available at: [www.europe-innova.org/index.jsp?type=page&cid=10337&lg=en](http://www.europe-innova.org/index.jsp?type=page&cid=10337&lg=en))

Policy makers at all levels should be concentrated on providing the best framework conditions by nourishing innovation, excellence and cooperation across the EU. To support this approach, common efforts are needed to achieve more synergies and complementarities between different policies, programs and initiatives.

”To promote the free transfer of knowledge produced in public research institutions and technological organizations, the basic construction of clusters should be supported by policies and programs for public networks and cluster. The purpose of these programs cluster is to promote the construction of clusters and networking in society to overcome market imperfections and improve structures to allow free movement of knowledge” (Thomas Alslec Christensen, Ger Meier Zu Kocker, Thomas Lammer-Gamp, Morten Solgaard Thomsen, Kresten Olesen, 2011).

### **3. Clusters - driver of sustainable economic development and the competitiveness promoter - analysis**

Interest in the research in the field of clusters has become increasingly larger in recent years, given the fact that they make their presence felt in large numbers in developed economies and in smaller numbers, but increasing, in developing countries.

For the analysis several data sources were used. One of them presents data on the employment rate in clusters and regions (the basis of the analysis), which shows the presence and strength of clusters per country. The other four data sources are divided into three categories: case studies, data on exports by type of cluster (additional perspective on the economic success of regional clusters identified) and data on national business environments.

The analysis was realized at cluster level (where relevant statistical information is provided by mapping of clusters - which leads to a better understanding of the present economic profile and performance of clusters). As the main advantage of cluster-level analysis is the comparability between regions and the main disadvantage is the inherent limitations of the data (the definition of cluster treats the dimension specific to the region of a cluster, reliance on data on employment rather than wages or productivity creates a fostering of industries with an intensive

labor occupancy). The power of regional clusters has also been evaluated, following a three star rating:

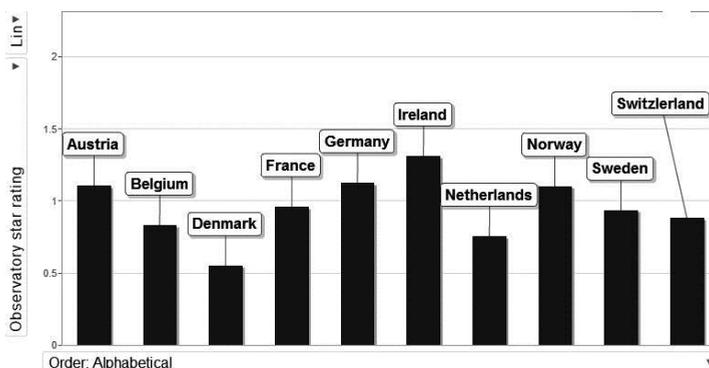
- Size (size - over 15000 employees)
- Specialization (specialization - over 1.75)
- Dominance (dominant - over 7%) (according to the European Cluster Observatory, available at: [www.clusterobservatory.eu](http://www.clusterobservatory.eu)).

“The first Human Development Report introduced a new way of measuring development by combining indicators of life expectancy, educational attainment and income into a composite human development index, the HDI. The breakthrough for the HDI was the creation of a single statistic which was to serve as a frame of reference for both social and economic development. The HDI sets a minimum and a maximum for each dimension, called goalposts, and then shows where each country stands in relation to these goalposts, expressed as a value between 0 and 1” (Human Development Reports, available at: [hdr.undp.org/en/](http://hdr.undp.org/en/)).

**Table 1: Top 10 European Union Member States to HDI ranking 2013 (Human Development Index)**

No.	Global Ranking	Country	HDI value - 2012
1	1	Norway	0.955
2	4	Netherlands	0.921
3	5	Germany	0.920
4	7	Ireland	0.916
5	7	Sweden	0.916
6	9	Switzerland	0.913
7	15	Denmark	0.901
8	17	Belgium	0.897
9	18	Austria	0.895
10	20	France	0.893

Source: adapted from UN Development Programme, Human Development Report, 2013



**Figure 1: Observatory Star Rating cluster from the top 10 European Union Member States, ranked according to HDI ranking 2013 (Human Development Index)**

Source: adapted from European Cluster Observatory, available at <http://www.clusterobservatory.eu/index.html>

Above in the table and figure, in the table mentioned the top 10 European Union countries are mentioned, according to the Human Development Index value from 2012, and then the graph which follows shows the European Cluster Observatory star rating, of these 10 countries. The purpose is to highlight the correlation between the level of development of a country and the cluster portfolio strength in that country.

#### **4. Conclusions**

Case studies show that although there are differences between countries in terms of policies and institutions that affect the development of regional clusters and cluster portfolios, the challenges faced by cluster organizations in their efforts to improve competitiveness are similar in many countries:

- regional clusters must overcome the barriers of collective action, especially the lack of trust between the public and private sector
- regional clusters should identify strengths / weaknesses of their location, decide on a positioning strategy for the regional cluster within the network of locations, in the category of clusters which is feasible and attractive, and create and execute an agenda of action that to help them achieve that position

Assessing the information made several observations and proposals emerge that will be presented below.

Emphasizing geographical specialization - European institutions must develop data, tools and methodologies to enable initiatives in member countries to be more effective.

Provides a process to support for initiatives of regional development clusters - the EU should focus its policies on increasing (improving) microeconomic capacity of Member States and their regional economies.

Improving the efficiency / effectiveness of EU competition policy

Increasing of regional specialization and the efficient allocation of economic activity across the area must be a main element of the European competitiveness effort.

Where there are regional clusters, cluster initiatives, organized efforts of companies, government agencies and regional research and education institutions, the economic benefits may increase.

In most EU countries, national cluster policies are implemented by agencies organized under the authority of various ministries. Across the 31 countries were identified 75 national agencies or at the state level. Most countries have 1-3 agencies.

Efforts to develop and support clusters are based on national programs and projects. The government has a strong role in initiating these efforts. To support clusters appropriately with their needs, cluster programs should take into account the technological field in which the cluster operates.

From the observations results low levels of regional specialization and correlation of regional specialization and economic performance, given that the policies pursued by the European institutions should focus the process of increasing geographical specialization of industries in Europe.

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- Human Development Reports, available at: <http://hdr.undp.org/en/>

## HIGHLY IMPORTANT OBJECTIVES FOR INNOVATION IN ROMANIA WITHIN THE EUROPEAN CONTEXT

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**Abstract:** *Romania, as a country with a low R&D level, in order to converge to the living standards of western economies, is doomed to foster private investments in applied research and experimental development. Thus, it is critical to study what are the main objectives for innovation at organizational level. This paper investigates the most important objectives for innovation in Romania and in the European Union, aiming to find out what are the main challenges innovative enterprises have to face. The general approach is focused on the analysis of the frequency with which these objectives occur, both at general and structural levels. Therefore we have extracted the most important three highly important objectives for innovation, both in Romania and EU: improving the quality of goods or services, the need to increase the range of goods or services and the entering new markets or increase the market share. All these three are positively correlated with the size (number of employees) of the organization. One of our findings underlines that there are fewer objectives in EU than in Romania, both at general and structural levels. Such a situation suggesting that the differences derive from two main sources: Romania has more needs, thus the enterprises target more goals, and there is a lack of managerial know-how that leads to non-prioritized objectives for innovation. Also, we identified an asymmetry, consisting in the fact that in EU, medium sized enterprises are more likely to act as the small ones, as opposed to the Romanian context. R&D and innovation component should be in the center of the Romanian strategy for convergence and competitiveness strengthening, treating differently the SMEs in order to foster innovation in a sustainable manner, through the encouragement of private enterprises to engage in partnerships for R&D an innovation. Also there is a critical need for governmental intervention in building facilities for the modern business infrastructures (business incubators, industrial parks, clusters, and competitive poles), creating a viable VC market for innovative projects, stimulating the creation of new SMEs and fostering internationalization of the local enterprises.*

**Keywords:** *Innovation; R&D; Objectives; SMEs; European Union*

**JEL classification:** *L29, M14, O32, O52*

## 1. Introduction

Romania presents itself as a country with low R&D level, thus being simultaneously subject to a wide gap in the economic development as compared with the EU average, but also to a great growth potential. The growth perspectives derive primarily from the following characteristics of the Romanian economy: the need for administrative and institutional structural reforms, generous fiscal space, good macroeconomic statistics, competitive labour costs, geographical position and existing natural resources. The administrative and institutional structural reforms can act as development boosting instruments on short and medium term, as their main effects (raising the quality of the governmental act, better law enforcement, greater efficiency of governmental spending, the narrowing of the gap between the nominal and the implicit tax rates etc.) would be rapidly converted in higher confidence in the economy, better positioning in terms of international capital flows and a decrease of the risk associated to Romania (the level of CDS). The existing fiscal space is a great opportunity, as it gives the possibility to allocate governmental funds to the development of the economy. In this sense, the resources could be directed as marginal contributions in order to raise the efficiency of the spending (co-financing the EU funded projects, participating in PPPs, partnerships with the international financial institutions), and should address with priority the following needs of the Romanian economy: creating modern business infrastructure (business incubators, industrial parks, clusters, competitive poles), creating a viable VC market for innovative projects, stimulating the creation of new SMEs and fostering internationalization of the local enterprises. All these sources of growth converge to the idea that developing the competitiveness of the Romanian economy is the number one objective in the medium and long run, and besides the structural and institutional aspects, the enterprises are the ones that can, or cannot, capitalize this potential. In order to make enterprises, an especially SMEs, more competitive on the global market, there should be consistent efforts for innovation, and thus, for internal and external R&D.

## 2. Theoretical framework

The theoretical literature regarding R&D underlines the growing importance of the R&D activities performed in networks as a result of collaborative approaches (Kesavayuth, 2012). The amount of the resources allocated for R&D is a good proxy for forecasting the success rate of the project, being registered a positive correlation between these two elements (Schwartz, 2012). This is why there is a pragmatic need for stimulating collaboration in order to generate the critical mass in order to ensure a risk – reward ratio of the projects that is bearable. There was an intense theoretical debate over the assumption that *“public R&D subsidies crowd out private R&D investment”*, but the empirical findings suggest that *“funded firms are significantly more R&D active than non-funded firms”* (Aerts, 2008).

Great energy was put into studying of the connections between the quality of the corporate governance and the tendency to conduct internal and external R&D. Although it is quite intuitive, the theoretical literature records results that point out that in order to *“enhance companies' innovation and R&D capabilities, need to improve their corporate governance”* (Dong, 2010). In one of the baseline studies focusing on the interconnection of general management and R&D projects underlines the following: *“(1) the presence of CEO incentive schemes increases both*

*corporate innovation effort and innovation performance; (2) sales-based performance measure in the incentive scheme, as compared with profit-based performance measure, is more conducive to firm innovation; and (3) CEO education level, professional background and political connection are positively associated with firm's innovation efforts*" (Lin, 2011). There are works that overcame the analysis phase, and formulated/proposed measures needed for developing the R&D component: (1) improving the management quality in SMEs and (2) incentivizing collaboration and cooperation (Martinez-Roman, 2011). Some authors approached the evolution of the R&D management, emphasizing that *"the perspective on managing R&D processes has changed over the years, moving from a technology-centered model to a more interaction-focused view"* (Nobelius, 2004).

A recent study of ours (Lavric, 2012) is underlying that at EU level, there are three groups of states, that differ one from another in terms of structure and intensity of R&D: (1) high R&D level (Finland, Sweden, Denmark, Germany and Austria); (2) medium R&D level (France, Slovenia, Belgium, Netherlands, Ireland, Great Britain, Estonia, Portugal, Czech Republic, Spain and Italy); and (3) low R&D level (Hungary, Lithuania, Poland, Malta, Slovakia, Bulgaria, Latvia, Cyprus and Romania). In this context, Romania, as a country with a low R&D level, in order to converge to the living standards of western economies, is doomed to foster private investments in applied research and experimental development. Thus, it is critical to study what are the main objectives for innovation at organizational level.

### **3. Methodology**

In this study we use the Eurostat data regarding the "Community Innovation Survey 2010" for Romania and the rest of the EU states. Because of the data availability, there were included the following countries: Belgium, Bulgaria, Czech Republic, Estonia, Ireland, Spain, France, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Austria, Poland, Portugal, Romania, Slovenia, Slovakia and Sweden. We also excluded from the analysis the United Kingdom, although it appears in the statistics, the data is fundamentally inconsistent and out of the normal variability around the rest of the countries.

The data set from Eurostat refers to the highly important objectives for innovation in 2010, including the study of product and/or process innovative enterprises, regardless of organisational or marketing innovation (including enterprises with abandoned/suspended or on-going innovation activities). So, our study will focus on the identification of the most relevant tendencies regarding the objectives for innovation in Romania and in the European Union, focusing the analysis in the following directions: (1) structural analysis in terms of enterprise size, (2) Romania's specificity in the European context and (3) correlation testing between different components.

### **4. Results**

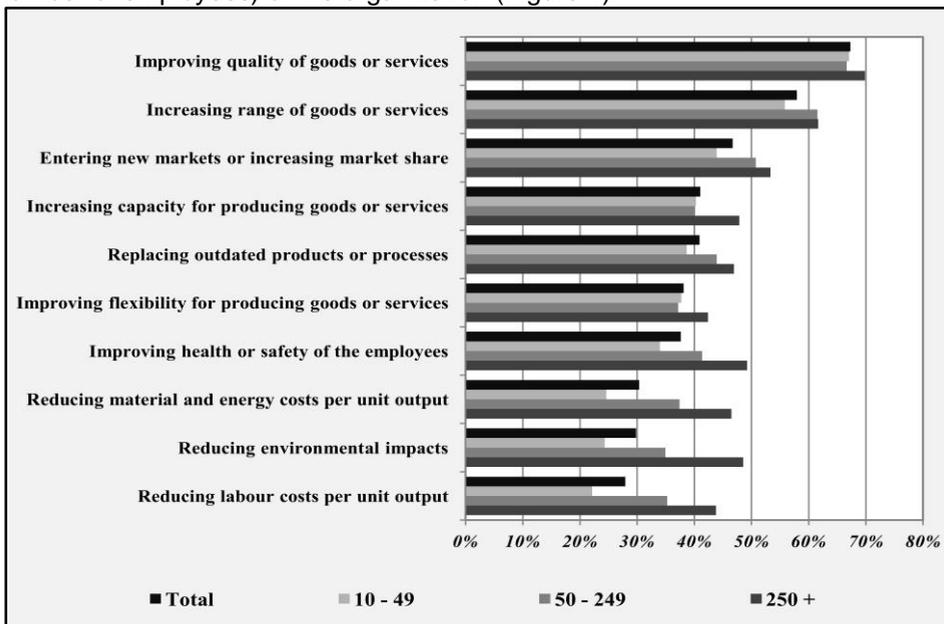
#### **4.1. Highly important objectives for innovation in Romania**

At micro level, it is important to analyze the specifics of product and/or process innovative enterprises, regardless of organisational or marketing innovation (including enterprises with abandoned/suspended or on-going innovation activities). In order to do so, we will focus our attention on the main innovation objectives in the

Romanian enterprises as compared to the EU situation. In this sense, the Community Innovation Survey is delivering data at EU level regarding the highly important objectives for innovation: (1) increasing range of goods or services, (2) replacing outdated products or processes, (3) improving quality of goods or services, (4) improving flexibility for producing goods or services, (5) increasing capacity for producing goods or services, (6) reducing labour costs per unit output, (7) improving health or safety of the employees, (8) entering new markets or increasing market share, (9) reducing environmental impacts, (10) reducing material and energy costs per unit output. As we see, these objectives can be classified at least by two main criteria: by types of resources and by level in a production system flow. By types of resources, we have financial, material, human and informational, and, in a systemic approach, there are inputs, processes and outputs. As we are talking about highly important objectives for innovation, it is clear that through R&D or know-how transfer, the organization is actually fostering primarily the informational resources, that transcend the classical paradigm and materialize in knowledge resources (some authors place it as a fifth type). If we look at the enterprises as open systems, it is obvious that innovation, and especially R&D, are strongly associated to the internal processes, but the objectives we investigate could be easily characterized by the type of the challenges those innovations are aiming to answer. Therefore, increasing the range of goods or services relates more to external pressures (local and external markets, changing consumer behavior, and technological progress), and implies primarily informational, material and financial resources. Replacing outdated products or processes is highly connected to sphere of internal processes in comparison with the technological edge and markets development (that covers such notions as life cycle of products and technology and comparative advantage). Improving the quality is a much more general objective, as there is large space and complexity in defining, in clear, specific and comprehensive terms, what the quality really is. The approach that dominates the debate on quality management, combining wisely the theoretical and the pragmatic aspects, states that quality represents the measure in which a product is responding to/satisfying the consumers needs in both its objective (value adding elements) and subjective (expectations, perceptions, emotions) dimensions. Improving flexibility for producing goods or services is obviously concerning the internal processes (that transform the inputs in order to deliver the output) and primarily the informational and human types of resources. Although flexibility proved to be a constant (for at least two decades) preoccupation of the theoreticians and practitioners in manufacturing, it is critical now as it was back then, because the processes that brought the paradigm shift, not only did not disappear, but got more intense and complex. Increasing the capacity of producing goods or services involves simultaneously, at high intensity, material, financial, human and informational resources. From a systemic point of view, it is more focused on internal processes and inputs. Such an objective it is more likely to appear in a market where there is a supply deficit, that could be generated by the scarcity of resources (natural or human), technological limitations or market asymmetries. This objective for process and/or product innovation it is actually congruence between stimulating productivity and efficiency growth. Reducing labour costs per unit, as well as reducing material and energy costs per unit output, are also related to the above mentioned elements (productivity and efficiency). Improving health or safety of the employees and reducing the environmental impacts, are two

objectives that are related both to the corporate social responsibility of the organizations and to the standards and requirement enforced by national and international laws. Maybe one of the most complex and difficult to fulfill objectives regarding innovation is to develop their capacity to enter new markets or increase the market share. It is mainly because for delivering on this one, there is an inherent need to accomplish at a considerable level the other 9 ones. As we see, there is quite a diverse range of preoccupation regarding R&D and innovation, therefore it is critical to measure and analyze these objectives in order to extract useful conclusions for the governmental authorities, entrepreneurs and managers that could be used in order to develop competitiveness, foster internationalization and raise private participation to R&D activities.

Romanian innovative enterprises record on average 4,18 objectives per organization, this indicator being positively correlated with the size of the enterprise (3,88 – small enterprises, 4,49 – medium enterprises, 5,10 in large ones). At general level, the most frequent objective is improving the quality of goods or services (67,29%), being followed by the need to increase the range of goods or services (57,93%) and the desire to enter new markets or increase the market share (46,72%). There are also enterprises for which increasing capacity for producing goods or services (41,06%), replacing outdated products or processes (40,92%), improving flexibility for producing goods or services (38,13%), improving health or safety of the employees (37,60%), reducing material and energy costs per unit output (30,35%), reducing environmental impacts (29,79%) and reducing labour costs per unit output (27,93%) are highly important objectives. Taking a closer look in terms of structure, we find out that there are 6 out of 10 analyzed objectives that maintain the positive correlation between the specific intensity of an objective and the size (number of employees) of the organization (Figure 1).



**Figure 1:** Highly important objectives for innovation in Romania by enterprise size  
 Source: Community Innovation Survey, Eurostat, own calculations

As a matter of fact, these 6 objectives can be divided into two main groups: objectives whose nominal growth rates are correlated with enterprise size (1) positively (convex profile), (2) negatively (concave profile) or (3) almost non-correlated (linear profile). In the third group there are the most ones: entering new markets or increasing market share; replacing outdated products or processes; reducing material and energy costs per unit output, and reducing labour costs per unit output. Each of second and first categories contains only one objective – reducing environmental impacts, respectively improving health or safety of the employees. In this context, we can argue that in the case of those objectives whose nominal growth rates form a convex rate, small and medium sized enterprises differ consistently from the large ones. On the other side, a concave profile suggests that the medium enterprises are more like large companies, thus small enterprises are characterized as more vulnerable.

#### **4.2. Highly important objectives for innovation in the European Union**

The innovative enterprises from the European Union record on average 3,14 objectives per organization, this indicator being positively correlated with the size of the enterprise (2,98 – small enterprises, 3,37 – medium enterprises, 4,02 in large ones). As we see, there are fewer objectives in EU then in Romania, both at general and structural levels. Such a situation suggests that the differences could occur from two main sources: (1) Romania has more needs, thus the enterprises target more goals, or (2) there is a lack of managerial know-how that leads to non-prioritized objectives for innovation. Even if the first hypothesis is true, in order to catch up the developmental gap, there should be established priorities, as the resources used are not endless. At general level, the most frequent objective is improving the quality of goods or services (49,84%), being followed by the need to increase the range of goods or services (46,58%) and the desire to enter new markets or increase the market share (41,97%). There are also enterprises for which replacing outdated products or processes (32,12%), increasing capacity for producing goods or services (28,72%), improving flexibility for producing goods or services (28,33%), improving health or safety of the employees (24,52%), reducing labour costs per unit output (22,52%), reducing environmental impacts (19,92%) and reducing material and energy costs per unit output (19,20%) are highly important objectives. It is obvious that the main hierarchy of the objectives is kept almost the same in Romania compared to the EU average, thus emphasizing that there are core challenges that all the EU states are facing and are pursuing to overcome through R&D and innovation.

Another two findings are that, in the EU context, (1) the frequency of all the analyzed objectives is positively correlated with the size (number of employees) of the organization, and (2) only one objective has a concave profile, while the others are characterized by a clear convex profile.

#### **5. Conclusions**

The underdevelopment of the Romanian economy and the growth rates that are below the potential, underline the need for a coherent strategy for convergence and competitiveness strengthening. So, the R&D and innovation component should be in the center of this catch-up process, and in order to do so, we have to start from

identifying the real needs of the enterprises, i.e. their objectives for innovation. Also, in order to foster innovation in a long term paradigm, SMEs should be encouraged to engage in R&D activities jointly with other organizations (other enterprises, universities, public and private research institutes, NGOs etc.).

In our study we identified, from a list of ten, three highly important objectives for innovation, both in Romania and EU: improving the quality of goods or services, the need to increase the range of goods or services and the entering new markets or increase the market share. All these three are positively correlated with the size (number of employees) of the organization. Also, it is quite obvious that they express the enterprises response to the globalization processes, underlining the importance of R&D and innovation in the in the global economy.

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## EMOTIONS IN THE ORGANIZATIONAL ENVIRONMENT

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**Abstract:** *At the heart of any workplace behavior (and not only), there are always one or more emotions (pleasant/unpleasant, partially controllable/uncontrollable, aware/unconscious, useful/useless/harmful, intense/less intense, predictable/unpredictable, expressed/ repressed, observable/ unobservable, explained/ unexplained, rational/irrational, and so on). Emotions are the foundation of a complex and mysterious mechanism of action and behavior. Emotions are triggered by certain things, people, events, situations, processes, results, interactions and so on, and are informed by a variety of endogenous (biological) and exogenous factors, and also by the intellectual potential of each individual. Emotions lie at the intersection of mind (rationality), body (physical) and soul (spirit), thought, reason, logic, compassion, autonomy and action/behavior, individual and environment. This article undertakes to define emotions and identify their impact on the organizational environment, with emphasis on emotional climate and managing emotions. Moreover, we will focus on human behavior/action, rather than on the evolution of the nervous system or the cortex in particular. Work itself should not be a source of suffering. It is obvious that certain emotions cause bad moods, unnecessary and even harmful ones, conditions that should be considered, even if they have a situational and subjective character. Some managers think that the decision-maker fulfills his/her duties by strictly conforming to the law and to the agreement clauses and by meeting his/her obligations in a timely and exacting manner. Others believe that a good leader, in addition to observing the applicable rules and regulation, must be honest also to his colleagues and collaborators and sympathetic to the needs, ideas and emotions of those who are interested in the optimal operation of the company. Managers must remain alert to events, people and behaviors that can trigger harmful emotions within the organization. Employees should be encouraged to express their emotions in order to avoid tense situations. Even though tensions may occur, they must be managed effectively because, as we all know, avoiding a war does not mean peace, just as avoiding unnecessary inconveniences does not always equal pleasure. The improvement of emotional behavior represents a competitive edge in business activities for any organization. The main target of this undertaking is to provide a certain perspective on emotion; to be more specific, we are concerned with discovering the circumstances and causes that trigger off emotions in organizational environments. Theoretical approaches conveyed in this article may be perceived as a call to mindfulness and to the managers' awareness as to the importance of improving the emotional climate of the workplace.*

**Keywords:** emotions; organizational environment; emotional climate.

**JEL classification:** D21, D83, J28, M12, M14.

## 1. General Introduction

As Rimé (2005) suggests, humanity has no other means to safeguard and preserve its constructs than *individual emotions*. The idea that the individual is hard-wired to have affects, possessing an emotionally viable organism, was proposed by Darwin. He also proposed that affects are useful, because they help the organism adapt to various vital situations.

We are aware that the discussion on the basic meaning of the concept of “emotion” as a trigger of human behavior might go on forever, given the multitude of scientific fields that operate with this concept (psychoanalysis, medical science, psychobiology, psychology, psychophysiology, organizational theory, philosophy, anthropology, sociology, etc.).

Turner (2010: 169) argues that sociology cannot fully understand human cognition, behavior, interaction, and social organization without a theory of emotions that drive all social processes. Workplace communication is not entirely rational, but influenced by an array of experiences/logical information pertaining to previous interactions (with the same individual or concerning a similar problem/situation etc.) and also by emotional memory (i.e. memories related to experienced emotional states, remembered states of affect).

## 2. A sneak peek into defining and characterizing emotions

In Rimé’s opinion (2005), the term “emotion” is recent and its early significance was basically related to collective behavior (for instance, “a certain emotion seized the crowds”). However, in Larousse’s definition of emotion (1870), the concept of “excitation, disturbance of animal economy” gained pre-eminence over the concept of “commotion that moves masses into action”. The Oxford dictionary (1933) traced back several key historical occurrences of the concept: in 1579, signifying “social commotion”, in 1600, denoting a “commotion or disturbance of the spirit”, in 1603, signifying a “migration, a transfer from place to place” and finally, in 1690, signifying “physical movement, commotion or disturbance” in John Locke’s writings (Rimé, 2005).

From a cognitive point of view, the concept of emotion includes an instigating/generating event, an interpretation of the latter and a consequent evaluation of this interpretation that determines a physiological change in the organism and a state of preparedness for action (Power and Dalgleish, 1998). The following aspects must be therefore taken into account: the occurrence of an event, the perception of its consequences, the consequent interpretation and assessment, the occurrence of a physiological change within the organism and the preparedness for action.

The definition proposed by Keltner and Gross (1999) integrates previous conceptions regarding the biological and social determinism of emotions, that are regarded as biologically based episodic patterns of perception, experience, physiology, action and communication of relatively short duration, that occur as a response to specific challenges and opportunities of physical and social nature.

As Cosnier (1994) shows, emotions, defined as states of preparedness and activation of largely innate behavior systems, that are also influenced by learning and training, belong to the category of *major motivational states* that generate orientated states of tension (tendencies to act, defined by their purposes and results). Emotions are primed response structures that intervene automatically

during the process of adaptation (Rimé, 2005).

In specialist literature, emotional response structures are defined in terms of vernacular language: fear, sadness, anger, disgust/contempt, amazement, shame, guilt, joy, surprise.

In Rimé's opinion (2005), states of affect include, apart from *emotions* (marked by quick induction, transience and discontinuity within the individual-environment relationship), a series of *non-emotional* manifestations of affect (that are less intense, less differentiated and more diffuse), such as:

- ↳ *Moods*: that may last from a few minutes to several weeks.
- ↳ *Temperament*: highly stable features of affect, that tends to persist for one's whole life.
- ↳ *Emotional disturbances*: syndromes that may last for several weeks or several years (depression, anger, phobias, Obsessive-Compulsive Disorders, panic attacks).
- ↳ *Preferences*: positive or negative manifestations of affect that constantly accompany one's dealings with objects, situations and people (attraction and rejection).
- ↳ *Affects*: diffuse incipient emotional manifestations, *positive* (hope, exhilaration, exaltation) or *negative* surges of affect (anguish, sadness, grudge) that do not qualify as emotions, as they lack discontinuity (unlike emotions).

Scholars recognize that emotions are distinct from attitudes (Perugini and Bagozzi, 2004) and suggest that emotions influence attitudes (Steenhaut and Kenhove, 2006) (in Agnihotri et al., 2012: 246).

Moreover, for Cosnier (1994), daily affective manifestations are interactional micro-emotions, conversational (phasic) affects, if they do not leave lasting (medium or long-term) impressions in the memory or have a lower intensity.

In his work, Ekman (1992) lists 9 features of basic emotions: (1) *the universality of emotional signals*: the expression of basic emotions is universally recognized (there are, however, certain subtleties that depend on culture and on the specific type of emotion); (2) the presence of *comparable expressions* between man and other primates (for instance, fear, anger, sadness and joy); (3) each emotion is based on *a specific physiological context*: it seems that there are certain specific schemes that describe the actuation of the autonomous nervous system, that have been verified at least for anger, fear, disgust and sadness; (4) *the universality of triggering events*: the generating situations share commonalities, i.e. a certain type of vital situations and challenges elicits specific reactions; (5) *the coherence of emotional reactions*: generally speaking, there is a congruence between the emotional experience and its expression; (6) *quick triggering*: physiological reactions may occur in a fraction of a second and mimic, within milliseconds; (7) *limited duration*; (8) *automatic perception mechanism*: emotions occur out of a sudden – they are neither voluntary, nor logical; (9) *spontaneous occurrence*: an emotional experience is not a deliberate choice, and that's because of the quick succession, the automatic perception and the involuntary expressive reactions.

For a large number of contemporary authors, only the "basic" or "primary" emotions (fear, happiness, sadness, anger, disgust, distress, shame, etc., whose number ranges between 4 to 10, according to each expert's own opinion) and the derivatives that result from combining the former count as emotions.

In Turner's view (2010: 176) there are at least four primary emotions: satisfaction-happiness, aversion-fear, assertion-anger, and disappointment-sadness. More than that, the author explains the variations in these primary emotions from their low-intensity to their high-intensity manifestations.

Clark (2013) distinguishes two classes of emotions, namely:

1. *Basic emotions* (such as fear, joy, and anger): these are seen to be evolutionarily old sets of responses involving stereotypical neural, physiological, and behavioral profiles that have evolved in response to recurrent evolutionary challenges (capable of being activated by unconditioned stimuli and leading to unconditioned, involuntary responses that cannot be easily modified by higher cognition).
2. *Higher cognitive emotions* (such as pride, shame, and guilt): these are held to necessarily involve sophisticated cognitive inputs by their very nature (such as means-end, causal, and counterfactual reasoning, long-term planning, social cognition, etc.), and to lack simple noncognitive elicitors; these emotions do not involve involuntary, stereotypical physiological, expressive, or behavioral responses, but rather involve responses that are learned or prescribed by the social environment.

Many, if not all emotions have both basic and higher cognitive forms that share all of the paradigmatic features of emotions according to Clark (2013: 74): while higher cognitive and basic forms do indeed differ in important ways, they can nevertheless be placed in a common evolutionary and developmental framework.

### **3. Emotions' impact in the organizational environment**

As far as the organizational environment is concerned, Brief and Weiss (2002) showed that the 30s set the foundation of the studies concerning the emotional life of employees, with work satisfaction as a pre-eminent object of research. According to Weiss and Brief (2001), one particularly influential study on the emotions of employees was conducted in 1932 by Hersey, who came to the following conclusions: there is a clear relationship between daily emotional experience and work performance; the daily emotional experience (although variable over time) shows well-defined cycles; the effects of negative emotional states are more pronounced than the positive effects of positive emotional states; both work-related and external factors (e.g., family life) have an impact and are relevant in enabling the employee's emotional adjustment to the work environment. Therefore, employees do not interpret and evaluate the situations in an abstract manner, isolated from the social, organizational and relational context in which they are experienced.

Riotti (2009) examines some reasons why moral, social, and political philosophers should be concerned about emotion-work and what it tells us about the nature of emotions and their moral, social, and political significance, and especially, their significance for agency and the relationships and interactions between agents. Emotion-work has fundamental impact both on agency and on well-being, both for those who do the work and for those around them: and for that reason alone, value theorists would do well to pay attention (Riotti, 2009: 57).

People have been shown to use feelings as information. The ease with which information comes to mind – i.e. how accessible it is - guides people's inferences about their moods, emotions, metacognitive experiences, and bodily sensations (Schwarz, 2012).

Emotions are aroused under two general conditions: (1) expectations and (2) sanctions. In all encounters embedded within mesostructures and macrostructures, individuals have expectations about what should and will transpire (Turner, 2010: 186):

- ↳ When these expectations are realized, individuals will experience satisfaction and more intense degrees of happiness, when they are exceeded.
- ↳ When individuals receive positive sanctions for their actions, they will feel satisfaction or perhaps a more intense form of happiness.
- ↳ If individuals fail to realize expectations and/or receive negative sanctions, they will experience negative emotions.

The distinguishing feature of emotional versus non-emotional states (passions, feelings, affects, preferences, moods, sensations etc.) is the discontinuity within the interaction between employee and organizational environment. The virtually infinite number of conditions that facilitate such discontinuities is clustered around two poles:

1. *Variations that pertain to the organizational environment*: the impact of strategies, plans, targets, tasks, events, phenomena, processes, physical or social circumstances etc.
2. *Variations that pertain to the employee*: the dynamics of needs, wants, reasons, ideals, dreams, goals, individual objectives, interests, concepts, beliefs, certainties, values, desires etc.

In order to avoid shocks, any variation that occurs at one pole must find adequate supporting resources at the opposite pole. To be more specific, when the management is about to implement certain changes, it should make sure that the employees will find the personal internal resources needed to handle such changes successfully. If such resources are insufficient, the continuity is endangered. In this case, the individual should reorganize his priorities in terms of motives (needs, expectations etc.), by resorting to cognitive-symbolic means.

As noticed above, the individual is the one who has to either find the resources needed to adapt to the changes in his environment or abandon his new needs, wants, intentions etc. in order to continue his relation with the environment (if he chooses to). In our opinion, however, emotions are not mere responses of individuals to unexpected variations/situations in the external environment, but transitory states by means of which a positive relationship between individual and environment is constantly adjusted/ rebalanced.

Just like any other resources distributed by institutions, emotions have a tendency to compound their effects: positive emotions provide the energy to gather resources in many domains, whereas negative emotions in one domain will often work against securing resources in others (Turner, 2010: 175).

*The positive effects of encouraging the expression of emotion at the workplace are: enabling self-understanding; stimulating feed-back; improvement of both intellectual (cognitive) and emotional skills; developing and maintaining optimal relationships within the organizational environment, with a positive impact on enthusiasm, loyalty, attachment, involvement etc.*

In Huy's opinion (2011: 1406), many executives continue to believe that affective neutrality and focus on tasks are the best ways to deal with emotional situations. So, they avoid discussing emotions at work and understanding their causes.

*The possible negative effects* of the failure to express emotions (of those unpleasant ones, that generate stress, in particular) are: a counterproductive (tense, stressful) work climate; the impairment of the employees' mental skills; the impairment of the employees' social and emotional capacity; the discouragement of immediate feedback; the dehumanization of the organizational communication process; the decline of workplace creativity etc.

All this negative aspects may determine reactions that any organization tries to avoid: physical/verbal aggression at the workplace, hostility, threats, negative feelings towards the organization, resistance to change, sabotage, revenge, decline of trust, negative self-perception, negative perception of the others, escalation of interpersonal conflicts, the decline of labor quality and quantity, the increase of personnel fluctuation, labor union actions that may lead to violence etc.

As far as the relationship between workplace, the experienced emotions and the associated behaviors are concerned, Van Katwyk et al. (2000) have discovered significant correlations between negative emotions experienced within the organization and a series of factors with stress potential (the volume of work, interpersonal conflicts, organizational constraints). Judge et al. (2006) have examined the correlation between hostility, workplace attitudes and deviance in the context of a dynamic approach to the role of emotions, such as the one provided by the theory of emotional events and discovered that interpersonal justice and hostility are significant predictive factors of deviant conduct within the organization. Tepper et al. (2006) remind us that people perceive a state of procedural injustice when they are denied the right to opinion or when the representatives of the organization behave disrespectfully during resource allocation. Tepper et al. (2007) show that victims of management abuse experience a high level of stress that indicates disturbances involving dysfunctional thoughts and emotions (anxiety, anger, depression, emotional exhaustion).

In a recent study, Kammeyer-Mueller et al. (2013: 47) explain that the results of their analyses were consistent with the perspective that surface acting emotion regulation strategies show a pattern of negative relationships with labor outcomes such as job satisfaction and stress/exhaustion (but not with job performance itself), whereas deep acting emotion regulation strategies show a pattern of positive relationships with all of these work outcomes.

### **3. Emotional climate and managing emotions**

As there is a growing pressure on employees to display their loyalty, commitment or even their identification with their employers, the emotional "climate" of workplaces has come under enhanced scrutiny lately (Kunda and Van Maanen, 1999).

The concept of climate has been used extensively in organizational psychology in an attempt to capture important differences in organizational environments. While an emotional climate may often be labeled by using names for emotions, such as joy and fear, we may also use labels that directly refer to the emotional relationships that are involved, such as hostility or solidarity (de Rivera, 1992).

The emotional climate is part of the organizational culture that affects everyone in the organization and refers to the quality of the organizational environment and the dominant relations and behaviors (how the employees emotionally relate to one another). Concentrating on the emotional climate of the nation-state, de Rivera (1992) referred to some of the different climates that have been reported in past

investigations: a climate of fear; a climate of security; a climate of instability; a climate of confidence or optimism (and their opposites, lack of confidence, pessimism, or "depression"); a climate of dissatisfaction; a climate of hostility; a climate of solidarity; a climate of hope.

Workplace emotional climate includes the whole of the employees' purely emotional reactions in relation to the organizational environment and culture: management style, labor conditions, relations between employees, communication climate, organization targets, work climate, change processes, external relations etc.

Emotions determine (even in the organizational environment) emotional/subjective experiences, cognitive alterations, psychological changes with an impact on the neurovegetative system, behavioral changes (verbal, non-verbal, paraverbal) and specific action drives (flight/escape, rejection, aggression etc.).

Every organization management should be concerned with encouraging the expression of emotion that strengthen and maintain a favorable/efficient emotional climate (for instance, a climate of security (trust, openness), stability, confidence, optimism, satisfaction, hope, solidarity). An unfavorable/inefficient emotional climate within the organizational environment (depression, instability, pessimism, fear, dissatisfaction, hostility, despair) shouldn't be ignored, because it may bring about both short-term and long-term harm. However, this doesn't imply that the repression of unpleasant emotions that lead to the instauration of the hostile climate should be encouraged.

Negative emotions are painful and, hence, will be often repressed. And, once defense mechanisms are activated, the repressed emotion will often transmute into a new emotion or set of emotions (they also become more intense) that change people's perceptions and propensities for action (Turner, 2010: 176).

Riitti (2009) explains why we seek to regulate emotions (our own/other people's emotions):

- ↳ Emotions convey information, both to oneself and to others, and as such, they can - and typically do - act as communications.
- ↳ Emotions act as incentives and disincentives - given the fact that emotions are perceived or even recalled as either pleasant or unpleasant, they also have more directly hedonic experiential aspects.
- ↳ Both the communicative and the hedonic aspects are subject to norms over which individuals have different degrees of control - and emotional labor conditions do not need to favor all equally.

Communication by means of emotions is faster and more subtle than verbal communication and, although its inner workings remain elusive, it can be highly beneficial in business or organizations (Goleman, 2002). In the process of communication, the message is conveyed together with the emotions of the sender. It is however true that there may be differences between intended and unintended emotions, and also between the intended and the received message.

It would be unwise for managers to simply presume that employees will always be genuine in their emotions while also displaying the appropriate mood. Instead, employee training for high emotional labor jobs should probably encourage deep acting over surface acting, and managers themselves should be trained to anticipate and proactively prevent episodes where employees may "break character" (Kammeyer-Mueller et al., 2013: 80).

Managing emotions is most often presented in studies concerning emotional intelligence. For instances, Mayer and Salovey (1997) have designed a four branch model of emotional intelligence: (1) perception, assessment and expression of emotions; (2) emotional enablement of thinking; (3) understanding and analysis of emotion and the use of emotional knowledge; (4) managing emotions for emotional and intellectual development. In the authors' opinion, managing emotions requires the following abilities: being equally open to pleasant and unpleasant emotions; deliberate engagement with or detachment from a specific emotion, depending of its value; conscious monitoring of emotions towards oneself and the others; the ability to manage emotions by attenuating negative emotions and intensifying positive ones.

Analyzing the organizational domain of emotions, Fineman (2001) believes that, while this doesn't necessarily qualify as actual full-fledged "control", organizations tend to incorporate emotion control schemes and that the process itself involves emotional experiences. The authors also shows that the desirable or undesirable character of emotional expression is regulated by means of explicit rules issued and enforced by authority agents or in an informal, discrete manner, through socialization and organizational "rituals".

Beyer and Niño (2001) make reference to 5 ways in which organizational culture shapes the emotional experiences of the employees: (1) through the management of the anxiety generated by the uncertainty inherent to the dynamics of social, economic, organizational life; (2) by providing opportunities and ways (spaces, codes of conduct) to express emotions; (3) by encouraging and discouraging the expression of emotion; (4) by instilling identification and commitment; (5) by inculcating ethnocentrism.

Seo and Barrett (2007) suggested an alternative approach organizations could adopt towards feelings: fostering the freedom of managers/employees to experience and express their emotions to maximize the positive outcomes of those feelings, while simultaneously helping them minimize the emotions' potential negative impacts (in Huy, 2011: 1406).

In Huy's opinion (2011: 1406), managers can also increase their emotional self-awareness by acquiring a richer vocabulary of emotions, by understanding the causes and consequences of various emotions such as shame, guilt, anger, pride and joy so they can recognize/regulate them, and express them to others in an articulated way.

## **5. Conclusion**

With the acknowledgment of the emotions' role at the workplace, specialist literature produced an impressive amount of studies and research on the negative or positive nature of the emotion's impact on attitudes and behavior within an organization.

Just as we people manage more or less successfully to repress/eliminate/ignore emotions/consequences we deem unpleasant/inefficient and to be open to emotions that are pleasant and bolster our performance effectively, on the other hand, so should organizations concern themselves with securing an emotionally intelligent environment. As Goleman et al. (2002) show, research has revealed three useful key ideas for creating a resonant, emotionally intelligent and effective culture: (1) the discovery of emotional reality, (2) the visualization of ideal and (3) the fostering of emotional intelligence.

Unfortunately, some organizations are not alien to various forms of physical (physical violence, exposure to situations that may endanger one's life etc.) and emotional abuse (verbal aggression, insult, offence, blame, instilment of guilt, inequitable treatment, withdrawal of support or threats with withdrawal of support for an individual in a relevant situation, various forms of justified or unjustified penalty, immoral conduct, abusive/ambiguous conduct of managers and supervisors, lack of respect, public humiliation etc.). In order to eliminate such dehumanizing behaviors it is important to accept and encourage the expression of unpleasant emotions felt by those who were afflicted by these treatments, in spite of any risk or costs that might be involved. Due to space limitations, in this article we did not consider thoroughly the risks and costs associated with the emotions' excessive manifestation in the organizational environment. This will be the focus of our further research.

The perception of emotion by the employees at the workplace cannot be prevented or averted. On the other hand, the employees can learn how to adjust their emotional reactions to achieve good communication within the organization.

People that experience unpleasant emotions may receive social support in the form of *emotional* (listening, positive affects, attachment, patience, availability, respect, consideration, appreciation, care, empathy, etc.), *informational* (messages, advice, opinions, reassuring information, solutions, indications, etc.) and *instrumental* support (material aid/services for relief, rest and mood improvement). Employees are able to learn the emotion expression regulation/codes (accepted/endorsed expressions), if the organization culture is one that allows and encourages the expression of emotions and stress reactions by the employees. They will be able to make better use of those emotions or emotional expressions that best ensure their security and the achievement of their targets.

Emotional workplace behavior encouragement and assessment schemes may include a set of implicit and/or explicit, written and/or spoken rules for an adequate emotional conduct, designed and implemented in way that helps people guide their conduct, enabling or inhibiting certain emotional expressions.

Perhaps the most important takeaway is that future studies should not neglect the role of dispositional affect in the emotional labor process (Kammeyer-Mueller et al., 2013: 72).

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## **FORCES THAT ENHANCE OR REDUCE EMPLOYEE RESISTANCE TO CHANGE**

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**Abstract:** *This paper is part of change management. The extent to which managers succeed to reduce the resistance to change from the part of the affected employees contributes greatly to the achievement of the targeted objectives that follow a change process. This paper aims to present a number of forces located both inside and outside the organization, forces that through their manner of expression may exert a direct influence on the increase or decrease of the opposition's intensity of those affected by the change.*

*The identification and analysis of these forces give to the involved managers in coordinating changes the possibility to reduce efficiently and effectively employees resistance to change.*

**Keywords:** *change, resistance to change, change in organizations, reduce resistance to change.*

**JEL classification:** *O30, O39*

### ***Introduction***

The complexity of the world in which we live makes the pace at which changes invade our life to be more accelerated. Everything around us is accelerating. The pace of technical innovations, technological discoveries abound all fields of science and technology, but also in the social area, generating a need for extensive changes in organizations. However, regardless of their knowledge, intelligence or quantity of data acquired over the life by people, they still remain social beings who do not like frequent changes. As Alvin Toffler stated in 1970 "the most disturbing thing is that most people, including the educated and refined ones, consider the idea of change so threatening that they try to deny its existence".

### ***Resistance to change***

Psychologists (Claes Janssen, 1982, Conner, 1998) explain that human resistance to change is a perfectly natural process. It is human nature to exercise opposition to a process laden with uncertainties and anxieties that generate discomfort and doubts.

Kurt Lewin (1951) explains in a logical manner correlated with the laws of physics that a change does not occur if the factors of a force that generates change are met with similar oncoming factors of a force that generates resistance to change. The force field analysis is the tool proposed by Kurt Lewin that allows us to identify and analyze the two major categories of forces that act as opposites.

An important ingredient that can greatly contribute to the lack or failure of a change is resistance to change. Employees opposition towards manager's proposed changes occur in any change process. We consider that the intensity of this force varies from one change to another, depending on a set of factors.

In the existing literature many experts present that resistance to change can be reduced by using some specific methods or techniques. To do this, first must be assessed the level of commitment to change. Representative methods proposed by specialists to assess commitment to change are:

- Chart commitment proposed by R. Beckhard and R. Harris;
- Curve commitment proposed by Michael Ward.

Kotter and Schlesinger (1979) propose several ways to reduce resistance to change:

- Training and communication;
- Participation and involvement;
- Facilitation and support;
- Negotiation and agreement;
- Manipulation and cooperation;
- Coercion.

The role of the reducing resistance to change methods alongside managers knowledge and skills are essential for a successful implementation. Managers who have the responsibility to coordinate a change must have the ability to choose and then use the appropriate method for each employee in direct correlation with the reasons underlying its opposition. Our belief is that the intensity with which an employee opposes a proposed change is influenced by a number of factors and this intensity can vary from one change to another, from one period to another, from one employee to another, from one organization to another and even from one country to another, depending on the manner of expression of certain forces, deemed by us responsible for increasing or reducing employee resistance towards change.

### ***Forces that enhances or reduces employee resistance to change***

The great diversity of forces identified as exercising influence on the acceptance or rejection of the change ideas in an organization has imposed their grouping into categories. In relation to the place from which it generates action, we can speak of internal forces, within the organization, and external forces, specific to the environment in which the organization operates.

We believe that internal forces exert more influence and their better understanding might be achieved if the subsystems that generate them are analyzed (change, employee, manager, organization).

#### ***Internal forces***

In the vast category of the internal forces we can include:

- Forces that relate with the particularities of the decided change to be implemented;
- Forces connected with employees;
- Forces which are related to the managers that coordinate the change;
- Forces connected with the organization features and processes that take place within it.

Certainly, the greatest influence on the manner in which employees respond to a change is change itself. The manner in which it enhances or reduces employee resistance to change is correlated with several dimensions of change: amplitude (the vertical size of change) that reflects the gap between the old and the new state;

stretch (the horizontal size of change) that reflects the number of employees affected by the change; the frequency with which the change is made; the way in which it keeps or not certain elements of continuity from the past; the way in which the announcement of the change has been prepared; the urgency of the change and the speed of its implementation required by managers; and last but not least, the extent to which the proposed change amends the way in which employees achieve their tasks.

Briefly, the influence of the change on employee resistance to change is also reflected in Table 1.

**Tab.1. The influence of the change on the intensity of the resistance to change manifested by employees**

C H A N G E	Forces that influence	Resistance to change	
		Small	Big
	Amplitude	small	big
	Stretch	local	general
	Frequency	repeated	singular
	Continuity	connected to the past	discontinuous
	Surprise	expected change	unexpected change
	Urgency	small	big
	Implementation speed	small	big
Changes the way things are done	to a small extent	to a large extent	

The manner in which each employee assesses change can generate a bigger or small opposition from employee's part. In this category we can also include as influence factors the following: the nature of employees activity, their trust in the manager who coordinates the change, the extent to which they agree or disagree with company's strategy and policy, qualification and how quickly they can find a similar job in another organization, job security, their potential for leadership, thinking style, age, temperament, their position in the organization's hierarchy as well as their seniority.

Shortly, employee's influence on the intensity of resistance to change is also reflected in Table 2.

**Tab.2. Employee influence on the intensity of resistance to change**

E M P L O	Forces that influence	Resistance to change	
		Small	Big
	Their perception	positive	negative
	The nature of their activities	innovative	routine
	Trust in the change agent	big	small
	Attitude towards company's policy and strategy	agreement	disagreement
	Level of training	big	relatively low
	Possibility of reintegration into the labor market	small	big

<b>Y E E S</b>	Thinking style	creative- innovative	conservative
	Leadership potential	small	big
	Job security	small	big
	Temperament	melancholic	choleric
	Age	young	old
	Position in the organization	important	insignificant
	Seniority	big	small

The intensity of employee opposition may be correlated with certain qualities and skills that the manager responsible for coordinating the changes have. Insofar as they have specific knowledge and apply change management principles, certain characteristics of their personality and management style can help reduce or increase employee resistance to change.

Briefly, manager's influence on the intensity of employee resistance to change is also reflected in Table 3.

**Tab.3. Manager's influence on the intensity of employee resistance to change**

	<b>Forces that influence</b>	<b>Resistance to change</b>	
		<b>Small</b>	<b>Big</b>
<b>M A N A G E R I</b>	Management style	participatory	authoritative
	Managerial abilities	excellent	satisfactory
	Holds and applies knowledge of change management	yes	no
	Holds and applies specific methods to reduce efficiently resistance to change	yes	no
	Communication and negotiation abilities	excellent	relatively low
	The degree of trust inspired to employees	small	big
	Leadership potential	big	small
	Position in the organization	top manager	bottom line manager
	Age	maturity	very young
	Experience	big	small
	Personality and charisma	strong	weak
	Innovative creative potential	big	small

Just as there are huge differences between the characteristics of the changes decided to be implemented in organizations, there are also huge differences between the attitudes of employees and managers, differences at the training level, commitment to organizational values and even their own personality. We find that there are a number of specific elements and processes that take place in organizations and they might contribute to a higher or reduced level of resistance to change from employees part.

We include in this category: organization's size, characteristics of the production processes (mass production, small production or series only), how much delegation of authority is used, characteristics of the organizational structure (a mechanistic structure where there are written policies and procedures to be strictly observed or an organic structure, where the goal is the achievement of the individual objectives), the way in which the payment and motivational systems are designed to work, the quality of the information system, characteristics of the organizational culture and the existence of trade unions in the company. Shortly, the influence of organization's peculiarities on employee resistance to change is also reflected in Table 4.

**Tab.4. The influence of organization's peculiarities on employee resistance to change**

O R G A N I Z A T I O N	Forces that influence	Resistance to change	
		Small	Big
	Complexity of the activity	big (high tech)	small (routine activities)
	Degree of centralization	small	big
	Production characteristics	small production and unique products	mass production
	Type of the organizational structure	organic	mechanistic
	The use of motivational systems for employees	yes	no
	A fair payment system aligned with the market labor	yes	no
	The quality of the information system	big	small
	The hierarchy distance	small	big
Organizational culture	pro change	conservative	
The pace of change in the organization	big	reduced	
Organization's market position	high	low	
The average age of stuff	low	high	
The existence of strong trade unions	No	yes	

**External forces**

Over the years it was found that a set of an increasingly complex and dynamic environmental forces exert a more powerful action over organizations. Even though we are tempted to believe that only internal forces exert an influence on employee's resistance to change, the reality is different. People react to a change also in terms of the specific characteristics of the business environment. We include in the category of external forces the following: the pace of the national economy development, the purchasing power of citizens, the unemployment level in the region, the professional reintegration opportunities, national culture characteristics, the dependence of an area or locality, as well as living standards.

Briefly, the influence of the external forces on the intensity of employee resistance to change is reflected in Table 5.

**Tab.5. The influence of the external forces on the intensity of employee resistance to change**

	Forces that influence	Resistance to change	
		Small	Big
EXTERNAL FORCES	The pace of the national economy development	small	big
	The purchasing power of citizens	small	big
	The economy is in crisis or recession	yes	no
	The unemployment level in the national economy	big	small
	Opportunities to change job	small	big
	Retraining opportunities	small	big
	Social instability	big	small
	National culture	pro change	conservative
	Dependence on a certain area	big	small
	The existence of some strategies and policies to promote the entrepreneurial phenomenon	no	yes
	Banking and insurance	weak	strong
	Wage dependence	high	low
	Standard of living	reduced	acceptable

### Conclusions:

Reducing resistance to change is a well defined and crucial phase in a process of change implementation in organizations. Successfully reducing employee's resistance to change creates preconditions for achieving a greater measure of objectives. For a successful completion of the reducing resistance to change phase important resources are needed. These resources are: necessary expertise in the field of change management, action coordination by competent change agents, time resources that will allow employees to accept the change as well as financial resources, necessary for motivating the affected by the change employees. By knowing the forces that can increase or reduce employees strength of opposition to the new ideas for change, managers can better coordinate the process, reducing the resources required to achieve the necessary commitment from those affected by the change, so that the implemented change is not reversible.

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## PERFORMANCE IMPROVEMENT STRATEGIES USED BY MANAGERS IN THE PRIVATE SECTOR

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**Abstract:** *There are many situations in professional life when for various reasons we are employed in jobs that do not meet our emotional expectations our professional capabilities, our passions and therefore performance on that job will not be high. Analysis of the causes of under-utilization of human potential and adoption of appropriate strategies according to employee needs help reduce staff turnover costs. The main objective of the present paper consists in identifying managerial strategies which contribute to the improvement of the employees' performances by stimulating their motivation, and the extent to which they are used in the managerial practice. Based on literature review we realized an integrated model and developed a classification, that present our own vision regarding performance improvement strategies. Our classification divides strategies for improving employees' performances into four main groups: by employees' development, by rewarding employees, by modifying the job description, by employee involvement in the organization. Starting from this model, through two types of questionnaires we have made an empirical research among managers as well as among office personnel, in order to capture both perspectives regarding the pursued objectives. For the present paper we will present only research results obtained for performance improvement strategies by employees' development because support a higher degree of generality and do not depend on the organization characteristics. A quantitative data analyze from the two samples show that there are differences between managers and employees perception when it comes to strategies used in their organizations and also manager did not know which determines employees to strive in order to improve their performance and obtain better results. The strategies to improve the employee's performances, proposed within this article have the role to show the fact that managers cannot determine every employee to be competitive by using the same methods, and therefore treating each differently person with the aim of creating for that person a favorable context for the development of the performance brings benefits at individual as well as at organizational level.*

Key words: performance improvement; motivational strategies; employee development; performance feedback; career planning; mentoring.

Jel clasification: M12; M51; M53.

## **1. Introduction**

As well as it may be forecasted, the evolution of economic conjuncture is accompanied by frequent restructurings, which affect the employees of a company in respect of quantity as well as in respect of quality. Knowledge of the employees' potential, performances and motivations and the ways in which these can be maintained represents one of the basic activities of the human resources management in an organization.

The first condition for improving the individual performance and reaching excellence in business is to recognize the role of human resources and to adopt appropriate strategies to determine the employees to fructify as much as possible the own professional potential. According to the opinion of some authors (Boswell and Boudreau, 2000: 283), in order to insure success, a company must know how to turn into account its employees' potential. Of course, we all can do more than we believe and the role of management in every organization is to turn into account the qualities and potential of its employees and to make their weaknesses (flaws) imperceptible. Considering that this study is part of a boarder research regarding the process of performance appraisal we defined the following objectives for the present article:

- identify motivational strategies used by managers in order to improve the performance of their employees;
- identify the differences between the perception of the managers and the perception of the employees regarding the ways to improve the performances;
- identify motivational strategies that would cause employees to achieve better performance.

The reason we chose to address performance and ways to improve it, from a strategic perspective is the fact that the management of organization must have a vision of efficient use of human resources. The need for a strategic thinking stems from environmental characteristics, found in a changing shift that is seen as a condition of progress.

## **2. Literature review**

The organizations' possibility of progress may only be achieved if these pursue continuous performance and therefore it represents one of the main objectives at the level of the organizations' management. Many of the studies approach only the organizational performance (Koning, 2004), but for instance 98% of the subjects of a study consisting in executive managers of average and big companies have stated that improved performance of the employees would lead to an increased performance of the company.

Numerous studies and statistical indicators (Campbell et al, 1998; Chen and Kuo, 2004) demonstrates that the success and competitiveness of organizations depend largely on the professional performance of employees, and the ways to improve it should become a pressing and permanent concern, in a competitive market.

Current concerns and organizational practice did not reach sufficiently convincing results in this area, recognizing the need for new searches and involvement of additional forces to identify as acceptable solutions. In addition, Romania studies (or their results) on strategies to improve employee performance are limited or are not sufficiently comprehensive.

Over time, management staff was asked what methods to improve the performance of work for their employees are more appropriate. We consider the issue of motivation as essential to human activity, for understanding and explaining behavior in general and especially those within organizations and therefore we can not talk about strategies to improve performance without implicitly bring into question the concept of motivation.

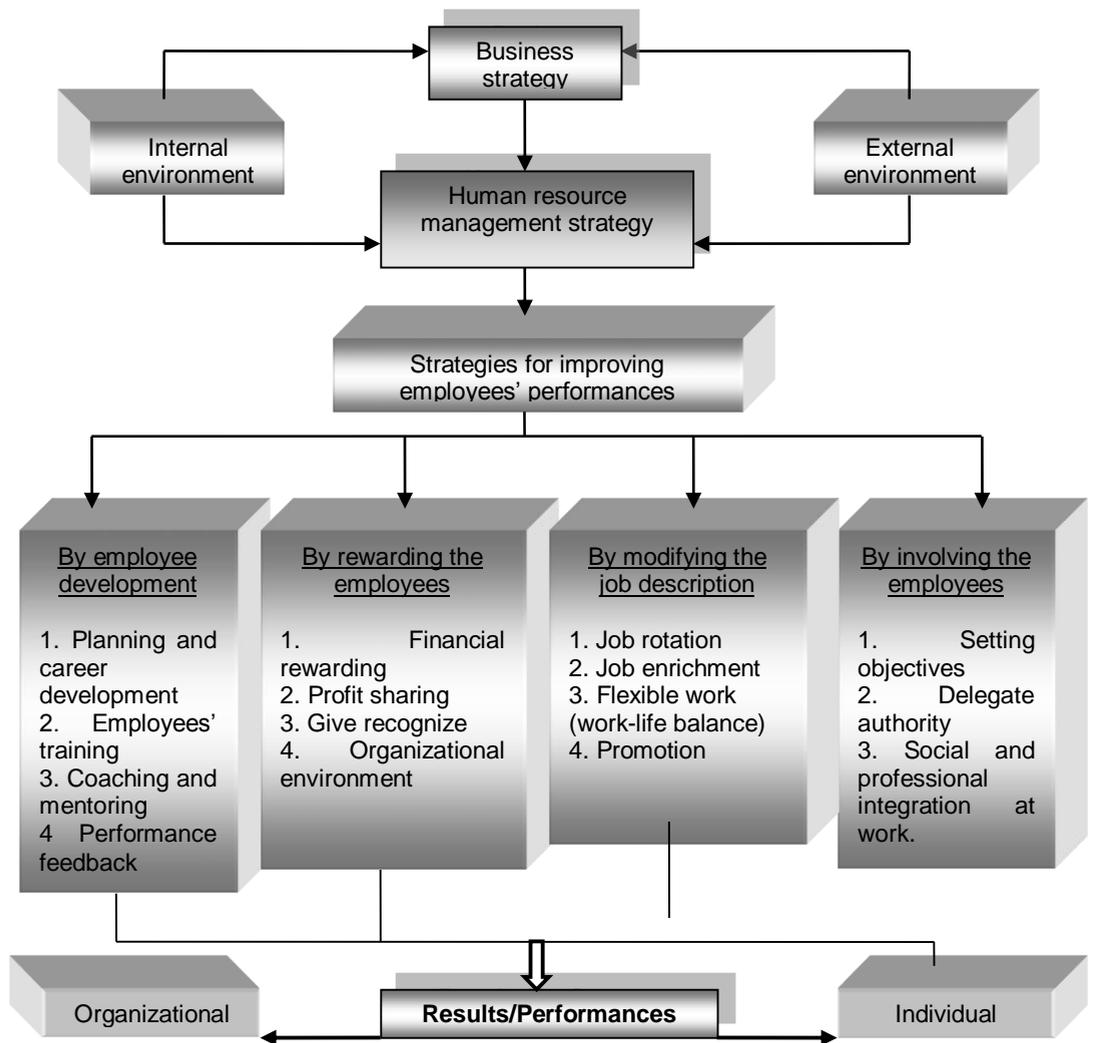
Studies (Ielics, 2001: 151) show that many managers believe that addressing behavior in terms of motivation is particularly difficult, while the problems that arise can take the following form: „how to persuade employees to do what you want?“ or „how can you be sure that employees will be working without direct and constant control?“

According to a study ([www.managementtoday.com.uk](http://www.managementtoday.com.uk)), conducted by Investors in People, a non-profit organization 30% of employees in the UK suffer from a lack of motivation at work, which is why 43% of them want to change jobs in the next 12 months.

Regarding the reasons for which they did not find motivators in work, 28% of employees who participated in the research said that a major reason is that do not receive support from superiors. Also 18% complained of the large amount of work, another 18% believe they are underpaid, while 17% of them believe that the main reason of demotivation is the lack of directions in career planning and development. This latter percentage increases to 24% for those already working two years in the same position.

If the goal for what people working is to live a decent and comfortable life, then their motivation is achieved through salaries, bonuses, or other organization facilities that provide comfort. There are also people who have provided this comfort for several generations and still continue to work. For some that they, we understand that work is a challenge, and part of their lives, giving them the opportunity of socializing and interacting with other people. These people can not be motivated by money or other financial incentives and therefore managers should know that their motivation for performance consist in providing a varied and challenging work or social rewards (eg, public recognition of the value of work performed).

For a better visualization of the classification strategies to improve employee performance, we designed an integrated model from detailed study of the literature, without pretending to be an exhaustive classification, given that human resource activities are interdependent and show intense linked. We took into account the need to estimate influences that may arise from internal and external environment of the organization. In order to obtain individual performance and organizational effectiveness, human resource strategies is a prerequisite, which is interposed directly in the process, as seen in figure 1



**Figure 1:** A model concerning the strategies for improving employees' performances  
 Source: author's conception

After analyzing articles in the field we shared motivational strategies to improve employee performance in four categories as: strategies to improve performance by employees' development, by rewarding employees (financial and non-financial), by modifying the job description and by employee involvement in the organization. Of these we choose to present only research results obtained for first group, performance improvement strategies by employees' development because support a higher degree of generality and do not depend on the organization characteristics. Another reason is that the most of the studies and specialty items made correlation between employee motivation and their development needs and that is why we tried to realize a comparison with results found in literature.

An important part of the theoretical and empirical research in this field aim to show that human resource strategies is a differentiating factor in business activity, but also provides a competitive advantage in the market (Grund and Sliwka, 2009: 2050; Koning, 2004: 3). In contrast, the number of articles and studies that establish a clear link between human resource strategies and performance improvement at the individual level (among employees) are lower, especially in Romania.

The continuous development of human resources involves identifying and capitalizing opportunities of lifelong learning to form a stock of valuable and competitive human capital and better use workforce. (Oniciuc, 2005: 37).

Human resource development should be a coherent process oriented to facilitate personal and professional development of employees, enhancing creatively the results of their work. This leads on the one hand to improve the performance of human resources, thus having an effect on growth company's performance, and secondly to increase workforce capacity to adapt to the requirements/needs of the market, thereby increasing the chances of finding a new job in terms of restructuring or changes in the organization.

### **3. Research methodology**

The target group of the study is represented by general managers, human resource managers and office personnel. The study was conducted on a sample of 40 organizations in production and services from private sector, in north-west of Romania. In order to achieve the objectives of the study, data was collected through two questionnaires, self-administered that were designed separately for the two target groups to capture both managers and employees' perspective on the most used ways to improve performance at workplace. Regarding questions we used mainly closed questions, with choice. Some of the used variables were built as Likert items with a scale from 1 to 5 (In a small extent; In a very large extent). Data was collected through a quantitative tool, a questionnaire, which took into consideration the following questions: „What made you get better performance at work?“, „What methods are used to improve performance by your manager?“ (for employees), „In order to improve the performance of your employees what are the most commonly used methods?“ (for managers).

Once you have applied the two types of questionnaires were obtained responses from 40 managers (general managers and human resource managers) and 80 employees, belonging to the executive sphere. Anonymity was ensured during the whole process of data gathering and analysis, no names or personal details being requested from respondents.

### **4. Results and discussions**

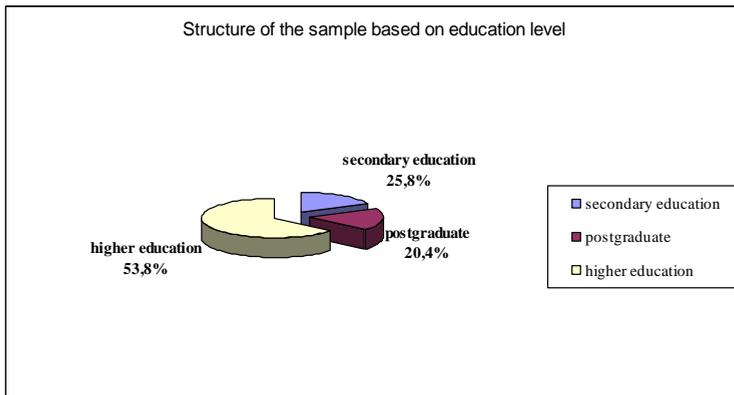
#### **4.1. Respondent's demographic characteristics**

In the following we present the structure of the two samples according to some socio-demographic characteristics: size of company, respondents' age, seniority in the company and on the job, level studies. Most respondents work in large firms (62.1%), followed by those working in medium-sized firms (17.6%) and small firms (12.4%); the rest work in micro firms.

The average age of managers-respondents is 43 years old and the post length within the organization is 8 years and a half, on average. In this way we made sure that

people who answer the questions have experience and service seniority in the organization (average 11 years), so that they can provide relevant answers regarding the study objectives. In terms of vocational training of respondents dominated by those with higher education (58.3%), but only one third of them attended postgraduate (31.7%), which shows that the majority were not conditioned by completion of a master's program to be promoted and are not concerned with its own development and lifelong learning.

Next we analyze the sample consists of employees in executive positions, so that their average age is 35 years, seniority in the firm is on average 7 years and 5 years in current position, which we can indicate a low staff fluctuation. Age of respondents is a variable that must be taken into account in the processing and interpretation of data, being a factor of influence in matters related to motivation and job satisfaction. Given the sample distribution by level of education of respondents we can observe in figure 2 that 53.8% of them are graduates of institutions of higher education, followed by those with secondary education (25.8%), while the percentage of respondents registered postgraduate (masters) is 20.4% We believe that the vocational training of employees is an important variable that influences their motivation for performance, and strategies to improve performance used by managers. Therefore in our research we aimed to test the following hypothesis: "There is a direct, positive correlation between educational level and employees' preference for strategies to improve performance through development " .



**Figure 2:** The structure of the employees respondents based on education level

To highlight the main aspects and elements, a descriptive statistics analysis has been used. Since the variables are ordinal ones, we have analyzed the values of the median.

In order to notice if there are significant differences between the respondents' answers, managers respective employees, in the interpretation of the results we will use the values of the t test on the two pair samples. Independent samples t test is used to test the difference between the averages of the same dependent variables measured in two groups consisting of different subjects. The reason for choosing such analyze solutions was based on the fact that in the case of this research subject, in order to obtain wider and more relevant results it is necessary to have the managers' opinions as well as the employees' perspective.

#### 4.2. Planning and career development.

One of the best ways to ensure long-term commitment and loyalty of employees to the organization is to transform a job of some into a career for that employee (Harrington, 2001: 234). Indeed the best way to keep employees is to make them understand that they have a future in the organization and thus will devote personal time to prepare for the opportunities for promotion that might occur.

Although in literature career planning is considered a key element in the human resources strategy and an essential component of career management, practice shows that managers do not give due importance considering it's a pointless waste of time and resources. For example the study conducted by Marinas (2010: 329) on a sample of 150 organizations in various fields show that frequency of use of career plans in the promotion of employees of Romanian companies is quite low. This is evidenced by low mean score (3.62) obtained from the processing of responses (using 7-step scale). The same study show that among the types of companies investigated, large companies are using in the lowest proportion career plan as a tool for career planning (21.43%). Promoting employees, iniquitously, on the needs of the moment impulse is evident expression of short-term orientation, the main value of culture in Romania.

Our research results show that for employee career planning and development is one of the strategies that would most determinate to improve their performance at work (mean 4.08). Analyzing the responses from managers we can notice that planning and career development of employees is not a motivational strategy often used by them (average 3.28), and results on sample of employees confirms this (average sample consists of employees was 2.52). Because the questions were the same, for both managers and employees we use statistical analysis. T-test indicate that is a significant difference between the opinions of the two groups and between the scores recorded in this variable (t-test value is 4,650,  $p < 0.01$ ).

We believe that managers consider employee career planning as a difficult activity difficult, devoted exclusively to the interests of employees and actually can not see the benefits at the organizational level. In exchange for the employees it represents guarantee of a job in the company they belong. Therefore further we present some advantages of career plans both for individuals and for the organization.

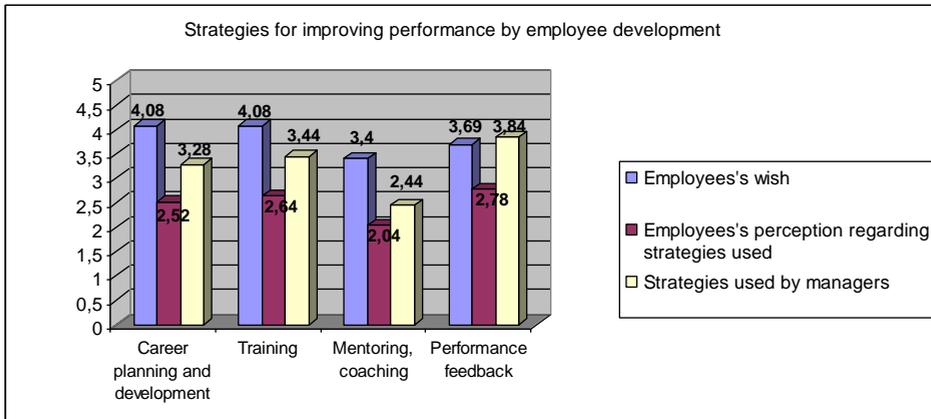
**Table 1:** Advantages of career plans

<b>Organization</b>	<b>Employee</b>
• reducing the costs of employee turnover	• development potential to promote the organization's hierarchy
• attracting and retaining performing employees	• increased autonomy and responsibility
• employee loyalty	• increase employee satisfaction
• increase employee performance	• achieving knowledge and experience

Source: adapted after Chişu, 2002: 315

Other authors (Harrington, 2001: 238) argue that without career planning, there is a risk that the organization have a workforce underused, disappointed, error-prone and migrating towards other organizations. We believe that in terms of organization, career planning can reduce the costs of labor movements, but also will benefit from

greater loyalty from them. Internal environmental changes are imposed by the new strategy determined by the appearance of new products, markets change, new technological requirements, the changes in the organization. Just these mutations whose pace is fast determined the need for career planning and practicing its management.



**Figure 3:** Different perspectives regarding using of performance improvement strategies in Romanian companies

### 4.3. Employees training

Training related to professional development is one of the main ways in which organizations can enhance employee performance (Bocean, 2009: 27). Between training and development must establish a certain distinction, at least in principle. Giscard (in Russu, 2004: 156) says that the training is to develop new capabilities, while developing involves improving existing capacities.

Total expenditure per employee of Romanian companies for training, make that Romania ranks last, while participating in professional training programs remains low. Thus in 2005 only 1.1% of the population in the age range 25-64 years participated in training as against the EU average of 9%. The situation was a serious concern because place at a significant distance Romania to the European target of 12.5% for 2011. (<http://www.mmssf.ro>).

From our research results (figure 3) it can be notice that participation to training and development is seen by employees a way that stimulates them to improve their performance (average 4.08), but their perception is that the organizations they belong to, is not really a strategy used by managers (average 2.64).

One reason may be the cost of such training (only 1.5% of the total human resources costs at company-wide are allocated for training activities) and also the fact that not always training needs are correctly identified among employees.

Responses received from the manager show that training programs are ranked 2 among performance improvement strategies they use in organizations to which they belong, and statistically there is a significant difference between the opinions of two groups (t-test value is 2.905,  $p < 0.01$ ).

The study conducted by Society for Human Resource Management revealed that 40% of managers consider employee training as the most important activity of human resource management (Knorad and Deckop, 2001: 270).

The explanation of such guidelines is that potential employees' work and thus their ability to obtain performance is limited time, not only in terms of age employees, but especially in terms of their migration to other companies. According to American managers, employees must be oriented to improve their performance so as to generate added value to the company. In conclusion we believe that training of employees, even if it involves some investment is a source of profit for the company able to guarantee its survival and stability of employees who are better trained and better paid. Also we believe that in case of major technological leaps, training all staff is definitely a supporting measure. In our opinion it is not enough for companies to provide employee training programs; more importantly, they should develop specific practices that seek the human potential (knowledge, experience, skills) new acquired in these programs to be capitalized in order to improve employee performance.

#### **4.4 Coaching and mentoring**

Coaching is "an interactive process through which managers and supervisors seek to resolve performance issues or to develop staff capacity through collaboration and based on three components: technical support, personal support and individual challenge" (Luecke, 2004: 2). The aim of the coaching is to improve professional performance, correct inappropriate behaviors and unlock a person's potential to maximize their own performance. Both results obtained on the sample consists of managers and those obtained on the sample consists of employees shows that mentoring and coaching are not ways to persuade employees to strive for better results (it was recorded the lowest average 3.4), nor strategies used by managers to motivate their actions for performance (average 2.44). This was the only variable for which we obtained agreement between the answers to the three questions. T-test statistical analysis indicates that no significant differences between scores compared are recorded ( $p > 0.05$ ), averages being very close (2.44 on managers' sample and 2.04 on employees' sample).

We believe that involving the employee in a personal process of exploration and discovery, setting goals and implementing a specific action plan, followed by appropriate feedback, coaching leads in time to obtain good results. Through coaching activity employee understand what are his limitations, which is the source of its failures and are supported in discovering the causes which prevent progress in a particular area or time (Bocean, 2009: 29).

Unlike coaching, mentoring initiative is the one who wants to develop, taking responsibility for this (Wanberg, et al, 2003). According to Luecke (2004: 78), the final difference between the two activities could be summarized as follows: coaching refers to the current job and current work, while mentoring concerns the career in general. Indeed these activities require effort, involvement and interaction daily workplace managers with subordinates, and from the results of our research we can conclude that there is actually no availability for developing coaching and mentoring programs to guide and orient employees.

#### **4.5 Performance feedback**

Through several studies that had examined the effects of feedback on performance concluded that that generally, people who receive immediate and frequently feedback achieve better performance than those who are not receiving (Stewart and Brown, 2011: 314). Other studies show that intake of feedback to enhance

professional performance of employees is significantly, recorded an improvement in results between 8-26% in average. According to Aubrey (2007: 174) in many cases performance even doubled shortly after the introduction of feedback.

The purpose of feedback is to determine the necessary actions to improve performance, corrective actions can be, but it is desirable to be preventive. Deficiencies in providing feedback contribute greatly to the problems of poor performance, yet most organizations do not have an effective system for providing performance feedback to their employees. Even companies that communicates to employees twice a year production figures and quality indicators actually gives them information, no feedback that have little impact on improving workplace activity. Feedback is a vital part of an individual's performance and development and therefore an organization needs to decide above all if the purpose of the feedback is developmental only, or if it will be evaluative and linked to promotion and reward (Rațiu et al, 2011: 344).

As you can see in figure 3, in order to improve the performance of their employees, managers surveyed say they use most often feedback (mean 3.84). This result is confirmed by more than half of the employees who responded to the question: What methods are used to improve performance by your manager? (mean 2.78).

Between the two samples pairs were obtained significant differences in responses, that was indicated by t-test values ( $t = 4,650$ , for  $p < 0.01$ ). Instead, performance feedback is not the preferred way to employees when it comes to what cause them to improve their work (mean 3.69), because they are afraid of receiving negative feedback.

Initial reaction of employees who receive negative feedback can be to make a greater effort, unless they are confident that they will experience success in terms of future results (optimistic perception of their own abilities). Otherwise, employees whose results are below expectations will become demotivated, will become defensive or conflicts with other employees. Therefore, an important aspect to consider to ensure that negative feedback leads to improved performance is confidence and helping employees, for them to realize that however have the necessary skills to improve future performance.

Unfortunately, many managers find it difficult to discuss the negative aspects of assessment and therefore try to avoid interview feedback. But, this is not the most appropriate solution, because an employee may not always be aware of his weaknesses and their consequences; therefore these can not be removed if the employee is not connected to the feedback. We believe that one of the manager's skills is the communication of a poor outcome of the assessment, along with discussions about ways to improve employee work without causing strong resentment along employees.

Another objective in our research was to test the following hypothesis: "There is a direct, positive correlation between educational level and employees' preference for strategies to improve performance through development".

In order to check the existence of a statistical link between these variables we have tested this assumption by correlating the level of education variable and the variable "I am determined to improve my performance in the following ways": career planning, performance feedback, training, mentoring (Pearson correlation). A single positive correlation was found between these variables, namely, the level of education correlate with career planning (the sig 2-tailed = 0.035,  $p < 0.05$ ; Pearson's

correlation coefficient is 0.384). One explanation, in our opinion, could be related to the fact that not everyone is interested about professional development and career planning; these are often an intrinsic motivation, only for those ambitious, for those, who needs esteem and achievement are important, so that their satisfaction will lead to progress on Maslow's pyramid. This conclusion is particularly important for companies' management, while the possibilities and opportunities for promotion and career development is an important way to boost employee performance.

## 5. Conclusions

Human resource strategies are increasingly necessary as essential components of human resource management conditioning the development and rational use of personnel of an organization. Strategies to improve performance costs are much lower than the losses caused by fluctuation of employees and their dissatisfaction. Conflicts, sabotage, defensive behavior, intensive fluctuation are just some of the forms of employee dissatisfaction. Fluctuation is costly and deeply dysfunctional and employee's departure affected good work in an organization, because on the one hand, a certain amount of time, colleges must take the burden off, on the other hand need to find a person in place, mean time to integrate in relation to current tasks and team work.

The result of this study bring into attention the fact that the perspectives of managers and employees from surveyed companies are quite different in terms of performance improvement strategies. Besides one variable (mentoring and coaching) for all other were recorded significant differences between the two groups. Therefore managers should pay more attention when chose strategies for improving their employees' performance, because not all of them react in the same way, due to different education levels, needs and motivational structure.

Concerning our hypothesis, one could say that it is partially validated since employee preference for certain strategies vary by level of educational attainment. Employees with higher education levels are determined to achieve better performance if their superiors are concerned about giving opportunities to plan and develop their career, for designing a clear pattern against which they can report their expectations and to direct their efforts.

In our opinion, one of the main measures that could to be taken in order to increase employees' performance, refers to fact that managers cannot determine every employee to be competitive by using the same methods, and therefore treating each person differently with the aim of creating for that person a favorable context for the development of the performance, brings benefits at individual as well as at organizational level. But, to perform this role, full understanding human behaviour and appropriate use of these strategies is required.

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# FACTORS AND REASONS THAT CAN MAKE USERS TO INCREASE THE USAGE OF SMARTPHONE SERVICES

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**Abstract:** *The purpose of this paper is to identify and analyze factors that influence the users of the telecommunications smartphone services for increasing the usage of such services. The first approach adopted was to study the literature review related to the technology acceptance models and the second, to test the hypotheses by using SPSS regression analysis. The research was performed in three multinational companies operating in Romania, collecting data from 307 respondents via a web questionnaire survey between 11th – 24th of February 2013. Since many companies have been used in their business the new technology, it is important to link the users' motivations with the specific of telecommunications services, in order to improve, in the end, the job performance.*

*The findings suggests that the users of smartphone services are very much influenced by practical reasons of getting access to the smartphone services, so that the telecommunications operators should consider the factors in the model to promote and increase the usage.*

*In this paper the conclusions related to the reasons and direction that can make users to increase the usage of smartphone services are coming both, from multiple factor regression analysis, as well as from the analysis of the sample research profile.*

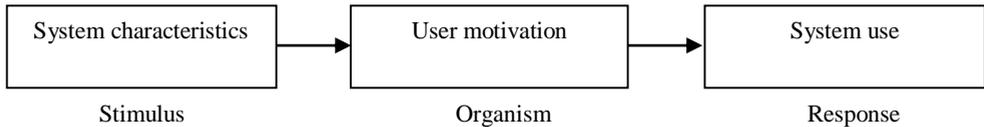
**Keywords:** *high technology, smartphone services, technology acceptance model, “national globalization”, remote management.*

**JEL classification:** *M31*

## **1. Generally Introduction**

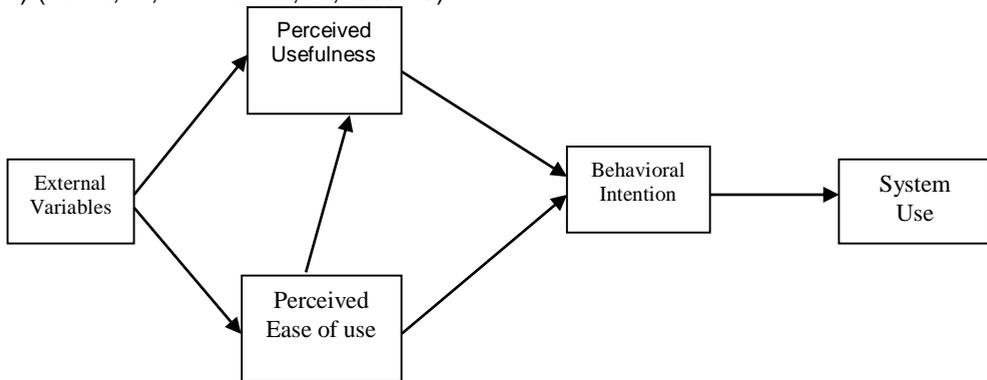
“Technological innovation is one of the causes of economic growth. Inventions drawn from new technologies and their rapid commercialization are bringing about a material richness in the lives of people” (Ishikawa, A., Tsujimoto, A., 2006:23). The progresses made in technology areas brought major changes in the last century at the level of producers, consumers and markets. The new wave of digital technology enables people to express themselves and collaborate regardless of different geographical areas they are living in. What they need to know, under these circumstances, is how to benefit efficiently by the technological advantages that are all around them becoming more common they thought in the early days. Many researchers were concerned about the reasons people accept and adopt new technologies and, in this respect, developed different models out of what the most popular remained the technology acceptance model.

The Technology Acceptance Model, proposed by Fred Davis in 1985 in his doctoral thesis at MIT Sloan School of Management, Cambridge, Massachusetts, USA is one of the most popular and used theory benefiting from most attention that explains the acceptance reasons of new technologies by users (Bagozzi, R.P., 2007: 22). In his initial theory Davis suggested that the use of a technological and information system is a response and could be explained and anticipated depending on the level of users' motivation which, at its turn, is directly influenced by external stimuli consisting of characteristics, parameters and technical data of that system (Figure 1) (Davis, F. D., 1993:487).



**Figure 1:** Conceptual model of technology acceptance  
Source: Davis, 1985

Based on the importance of Davis theory, this was developed during the years by different researchers getting a final version in 1996 by Venkatesh and Davis (Figure 2) (Davis, F., Venkatesh, V.,1996:45).



**Figure 2:** The final version of technology acceptance model  
Source: Venkatesh and Davis, 1996

The telecommunications sector is, by definition, one the most exposed to the technological progress and innovation due to the following aspects: imply high technology devices, the means to transform the capabilities of equipments into services are related to a reliable network implying high technology too and the terminology and language is close to IT and technical domain again. One of the very well known theory that describes the influence of innovations on the users' behavior and decision to accept high technology is the Diffusion of innovations developed by E. Rogers starting with 1962. The diffusion of innovation refers to the spread of an abstract idea, concept, technical information and actual practices within a social system using communication and influencing (Rogers, E.M., 2003). The decision-

making process would be influenced by the characteristics of innovations that determine an individual's behavior to adopt or reject an innovation.

The innovation characteristics are highly important in determining the diffusion of that innovation through the members of a social system increasing or not the adoption rate. The spread of a new idea is basically influenced by four main elements: the innovation itself, communication channels, time and a social system. During this communication flow, the idea is rarely evaluated from a scientific standpoint; rather subjective perceptions of the innovation influence diffusion and then the adoption decision (Wejnert, B., 2002:326).

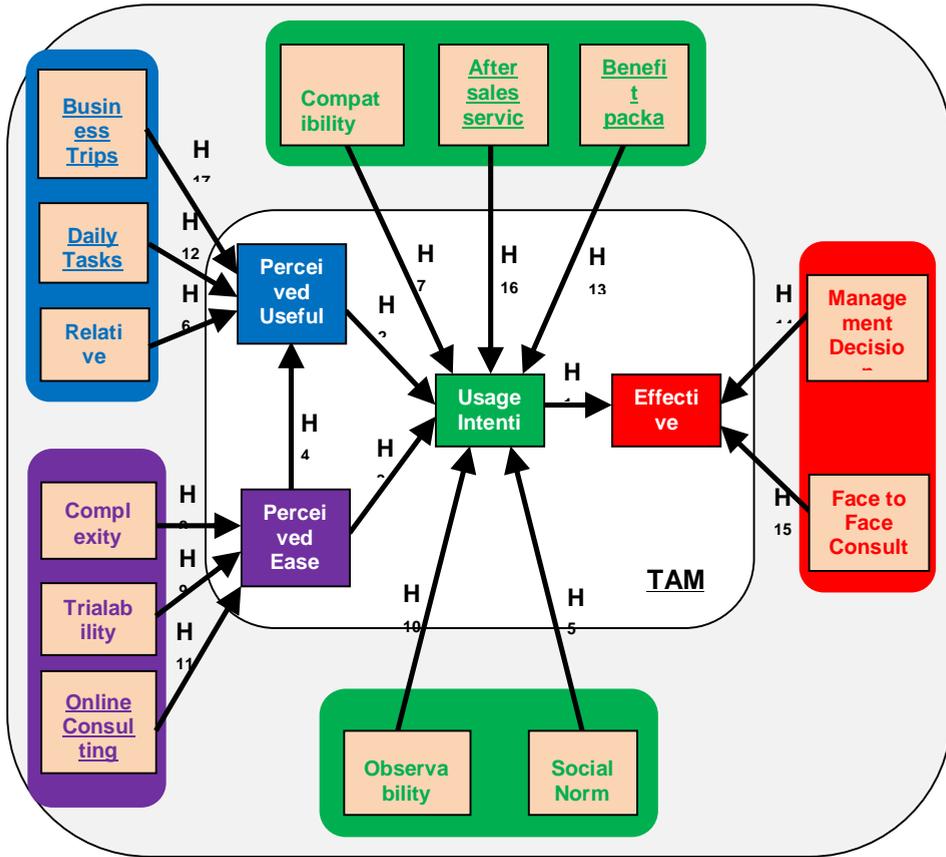
## **2. The research model and hypotheses development**

As a result of studying different theories related to high technology acceptance, the focus in designing proposed research model considered as the background the Technology Acceptance Model (TAM) and it was developed by attaching the variables coming from the specifics of the smartphone services sector within the multinational companies context. What was considered as external variables in the final version of TAM get shape by specifying them in the proposed research model (Figure 3), on the one side, using the attributes of the innovation and on the other side, using the variables coming from the researchers' experience and specialization.

Taking into account the fast progress of technology, the new products and characteristics developed within the telecommunications industry, the others becoming obsolete and useless, the review of the literature and the experience in the field of more than seven years, the smartphone would be described as a mobile phone equipped with an operating system such as: Android (Google), IOS (Apple), Windows Phone (Microsoft), Blackberry OS (RIM) etc. on which can be run multiple applications capable to perform different actions: internet access, document office package, email, messenger, multimedia, agenda, etc., making it very close to a pocket personal computer.

Independently, the smartphone represents just a complex device with huge potential, but without final purpose. Making a parallel thinking with the definition Bouwman et al. (2008) gave to the internet services as being an activity or series of activities that happen when consumers are travelling, the services being delivered by a mobile operator that ensures the connectivity (Bouwman, H., Carlsson, C., Walden, P., Molina-Castillo, F.J. & al., 2008:93), smartphone services could be defined as being those activities and services that can be performed in real time due to the proper integration of the smartphone characteristics and the capacity of the telecommunications operators to value them anytime and anywhere.

The TAM was found as a very usable one with a very important emphasis on the usefulness, ease of use and external variables that are different from business to business (Yousafzai, S.Y., Foxall, G.R., Palliester, J.G., 2007:280).



**Figure 3: Proposed research model**

Telecommunications services have three impacting parts:

- the continuous need of communication between people, especially in a globalization era when the information is required to circulate very fast between people, people and companies, between companies etc.
- the complexity coming from the intrinsic nature of the products that contributes to perform them: user device, technology network and the software included in the device in order to make possible the connectivity
- the level of knowledge that the users should have to perform them effectively. In the digital era, the product development exceeds the speed at which the user can understand and adopt new technologies and, as a consequence, the product performance is far in advance to the consumers' needs (Kotler, P., Caslione, J.A., 2009).

Accordingly, we hypothesize that:

*H<sub>1</sub>: The intention of use (IU) will have a positive influence on the effective usage of smartphone services (EU)*

*H<sub>2</sub>: The perceived usefulness (PU) of smartphone services will have a positive influence on the intention of use*

*H<sub>3</sub>: The perceived ease of use (PEU) of smartphone services will have a positive influence on the intention of use*

*H<sub>4</sub>: The perceived ease of use (PEU) of smartphone services will have a positive influence on the perceived usefulness*

*H<sub>5</sub>: The social norm(SN) will have a positive influence on the intention of use*

As explained in the diffusion of innovation theory the attributes of the innovation could significantly contribute to the decision of adopting or rejecting the new idea or system, in our case the smartphone services. In the mobile telecommunications services it can be seen a range of reasons people use them and a survey made with the students at the University of Ibadan, Nigeria in 2005 showed that: 42% use them because is the latest technology, 75% considers that facilitates the communications on the move, 52% appreciates the access to the information in real time, 50% of the students use them because ensure the communications with friends and colleagues and other reasons refer to the fact that they are used by many people and indicate a certain level of social status (Olatokun, M.W., Bodunwa, I.O., 2006:547).

Considering the high level of technology used together with these services, the day by day need of them and the high speed progress made in this business area when an innovation is replaced by the other in just six months (Omekwu, CO., 2006:863) we hypothesize that:

*H<sub>6</sub>: The relative advantage (RA) of smartphone services will influence the perceived usefulness*

*H<sub>7</sub>: Compatibility (CMP) with smartphone services will influence the usage intention*

*H<sub>8</sub>: Complexity (CPX) of smartphone services will influence the perceived ease of use*

*H<sub>9</sub>: Trialability (TLB) of smartphone services will influence the perceived ease of use*

*H<sub>10</sub>: Observability (OBS) of smartphone services will influence the usage intention*

The information technology (IT) is one of the major factors of the globalization process in both, commercial sectors and geopolitical area. The progresses made from early 1990 to our days in software development, telecommunications and digital technology led to a rapid transfer of data and knowledge in the entire world (Kotler, P., Caslione, J.A., 2009). Starting with 2000 in Romania started the process of centralizing the legal entities of the big companies in only one, as a headquarters in one location, keeping in the territory only points of sales, branches or, at best, the subsidiaries. In this way they moved, in fact, the strategic thinking at a national level, while the execution remained at the local level, naming, in this way, in our view, the "national globalization" of businesses where the scale economy and other administrative advantages could be better exploited. Therefore, the management of the whole company consisting of one legal entity – headquarters - and point of sales, branches in territory, changed consequently, moving mainly from face to face management to "remote management" when telecommunications and travelling became very necessary. Moreover, the management of the company related to human resources considers more and more in the benefit package the allocation of telecommunications devices and services making possible the connection anytime and anywhere. Thus, the context of smartphone adoption is influenced both, by individual factors that could be: age, education, experience and personal traits and

organizational factors that include: top management support, size, user involvement and product champion (Park, Y., Chen, J.V., 2007:1365).

The complexity of telecommunications services, as a cumulated consequence of the equipments and technologies complexity associated with specific notions and language lead to the idea that the access and the usage of the related services could not be anymore the result of using by chance, of simple intuition, repetitive attempts, feelings or luck (Ishikawa, A., Tsujimoto, A., 2006). Based on the above reasons and the experience in field of the researchers, we hypothesize that:

*H<sub>11</sub>: Online consulting (OLC) offered to the users will influence the perceived ease of use*

*H<sub>12</sub>: The daily tasks performed by employees (DTP) will influence the perceived usefulness*

*H<sub>13</sub>: The benefit package supplemented (BPS) with smartphone services and devices will influence the usage intention*

*H<sub>14</sub>: The top management decision of the company (TMD) will influence the effective usage of smartphone services*

*H<sub>15</sub>: The face to face consulting (FFC) will influence the effective usage of smartphone services*

*H<sub>16</sub>: The after sales services (AFS) related to smartphone will influence the usage intention*

*H<sub>17</sub>: The business trips (BT) will influence the perceived usefulness of the smartphone services*

Kotler, Kartajaya and Setiawan (2010) mentioned in their book Marketing 3.0 (p.85): "(...) that there are two distinct ways to convince people. The first one is to base your ideas on a set of facts and numbers and engage people in intellectual arguments. An alternative, which he thinks is much more effective, is to write compelling stories around the ideas and engage with people emotions instead". Based on this, the study of beliefs and virtual relationships between people that influences behavior becomes more and more important and it is the top priority when new products and services appear on the market.

### **3. Research methodology**

The instrument of this research was a web questionnaire composed of three sections. The first section included terms, definitions, estimated time to complete and some clues about the completion. The second section included the 48 items for measuring the independent variables and multi-items were used to measure each. A five-point Likert scale was used to measure the items from strongly disagree to strongly agree. Most of the items, related to H1-H10, were found in the previous researches related to technology acceptance and the items related to H11-H17 were based on the experience in the field and the specialisation of the researchers. The third section included the demographic data about the respondents.

#### **3.1. Sample and measurement**

The research population was coming from the employees of the three multinational companies covering the whole Romanian territory. There was emailed 617 web questionnaires and of those, 589 were received and 28 were returned undeliverable. From a total of 344 questionnaires accessed between 11th-24th February only 307 were finalized, 37 remaining incomplete. The population of smartphone services

users was at a level of 289 which shows a response rate of 46%, while 18 respondents were non smartphone users.

The internal reliability of the multi-items scale was measured using the Cronbach alpha analysis in SPSS 20. Results indicated higher value than 0.7 (Table 1) which is considered acceptable , except the Complexity that due to its low value of 0.245 was removed from further analysis.

**Table 1: Mean, Std Deviation and Cronbach alpha of factors**

<b>Factors</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>N</b>	<b>Cronbach alpha</b>
Effective usage	4.11	0.537	289	<b>0.897</b>
Usage intention	4.58	0.584	289	<b>0.850</b>
Perceived Usefulness	4.29	0.625	289	<b>0.887</b>
Perceived Ease of Use	4.19	0.547	289	<b>0.732</b>
Relative Advantage	4.01	0.724	289	<b>0.865</b>
Compatibilitz	3.97	0.688	289	<b>0.847</b>
<b>Complexity</b>	3.77	0.561	289	<b>0.245</b>
Trialability	4.11	0.600	289	<b>0.732</b>
Observability	3.82	0.696	289	<b>0.695</b>
Social Norm	3.34	0.783	289	<b>0.763</b>
Management Decision	3.54	0.956	289	<b>0.924</b>
Benefit Package	3.41	1.005	289	<b>0.892</b>
After Sales Services	4.03	0.739	289	<b>0.819</b>
Online Consulting	3.74	0.819	289	<b>0.812</b>
Face to face Consulting	3.78	0.739	289	<b>0.853</b>
Business trips	4.27	0.719	289	<b>0.891</b>
Daily Tasks	3.73	0.847	289	<b>0.838</b>

### **3.2. Hypothesis testing**

Considering the big number of variables, independent as well as dependent, the hypothesis testing was performed using the regression analysis in SPSS 20. The first approach was to demonstrate Technology Acceptance Model (TAM) with H1-H4. In summary, this research confirms the results of TAM with IU having a positive significant influence on Effective Usage (Beta=0.598, Sig.=0 ), then PU and PEoU had a positive impact on IU (Beta=0.626 and Sig.=0 and Beta=0.547 and Sig.=0.02) and finally USP having a positive significant influence on UTP ( Beta=0.422 and Sig.=0). The other two variables considered by researchers as having influence on EU namely, MD and FFC showed as follows: MD positive significant impact (Beta=0.587 and Sig.=0) supporting H14 while FFC was demonstrated not to be significant (Beta=0.075 and Sig.=0.06) and thus not supporting H15. This could

come from the fact that in the tested population 62% of respondents have been used smartphone services for more than two years.

The second approach was to test the other hypotheses related to IU, UTP and USP constructed based on literature and the experience of researchers. Out of seven hypotheses related to IU it was showed that two of them (PU and PEOU) were part of TAM and significantly impacting IU and from the other five only one, CMP, (Beta=0.738 and Sig.=0) demonstrated strong positive impact to IU supporting H7, while the other four showed not significant influence on IU as follows: AFS, negative and insignificant influence (Beta=-0.094 and Sig.=0.13), BT as well negative and very insignificant (Beta=-0.041 and Sig.=0.45), the SN was found not influencing IU with Beta=0.075 and Sig.=0.15 and OBS not being significant as well (Beta=0.059 and Sig.=0.37) finally not supporting H16, H13, H5 and H10. The hypotheses related to PU, H17, H12, H6 and H4 proved to be true with significant impact as follows: the strongest positive impact had AR (Beta=0.556 and Sig.=0), then BT with Beta=0.301 and Sig.=0) while the DT showed negative significant impact (Beta=-0.183 and Sig.=0). PEOU as part of TAM had a positive significant impact on PU with Beta=0.422 and Sig.=0.

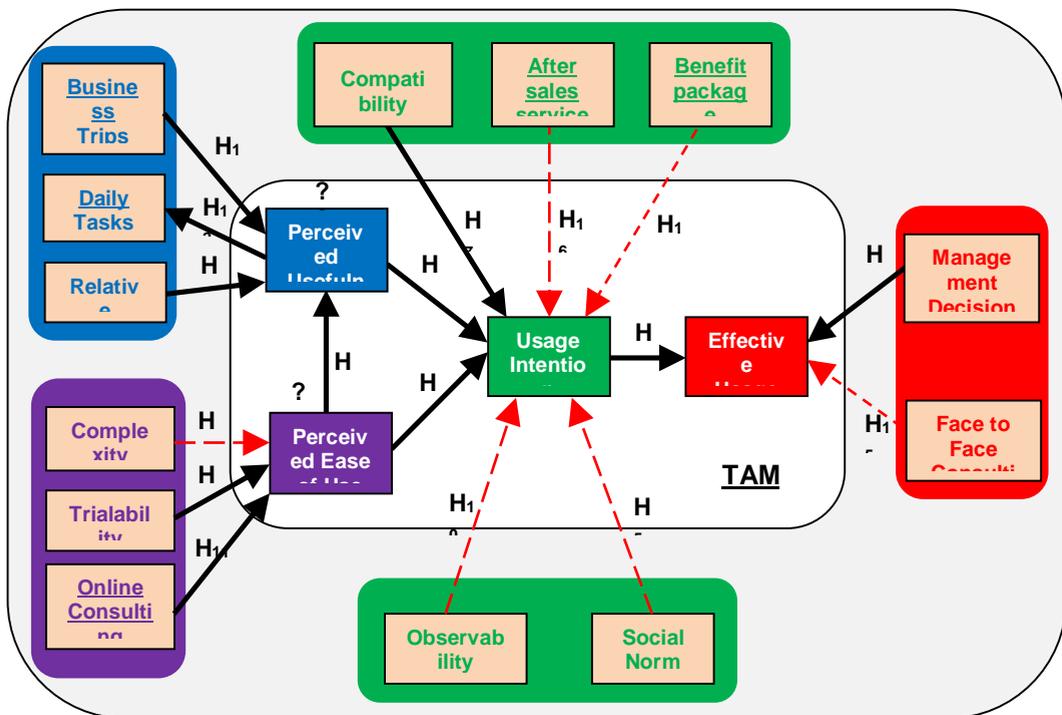


Figure 3: Proposed research model with the entire sample

.....> it was mentioned with dotted arrows the not supported hypothesis  
 In the end, of the three hypotheses related to PEOU, H8, H9 and H11, CPX not being reliable as factor after reliability analysis, OLC and TLB were found with positive and

significant impact on PEOU (Beta=0.504 and Sig.=0.002, respectively, Beta=0.422 and Sig.=0) supporting H9 and H11.

#### **4. Conclusions and implications**

The influencing of technology users today, when they are very well informed and can easily compare similar offers on the market, should make the practitioners use the studies and results in a smart manner to be able to create attraction and interest much more than the users can do. The people shouldn't be treated as simple consumers, who takes the ads and commercials as such, but they should be considered as human being as a whole with brain, heart and spirit (Kotler, P., Kartajaya, H., Setiawan, I., 2010). Based on the results published by Nielsen Global Survey, fewer consumers take seriously the commercials issued by companies and 90% pay much more attention to the recommendations and advices coming from the people they know or friends from social networks (Ishikawa, A., Tsujimoto, A., 2006). The results of this research and the proposed model could serve as a clue to identify manners of how to increase the usage of the smartphone services as the employees have granted access to them. From the model and the regression analysis it results that TAM keeps its reliability applicable in the smartphone services area too, but clearly with some nuances. In order to explain them it is important to understand the profile of the research sample: first, the respondents were smartphone users in proportion of 94% out of that 64% are experienced ones with more than two years of using the related services. Related to the age, 49% are younger than 40 years and 60% males and 40% females having a large professional experience with 60% between 6 and 20 years. In terms of education they had 33% technical background, 38% economic and the difference with other specialties. In our view, this sample profile contributed very much to the results of the research versus what was thought initially. The very obvious one is that in this context of smartphone users, H15 related to face to face consulting and H10 related to trialability are redundant as long as the users are very experienced, that's why, complementary, it is supported H15, the online consulting, the respondents being used with IT devices and services. On the same path H7, the compatibility with their lifestyle is supported. Having an overview at the model we could conclude that, again due to the sample of smartphone users achieved, it would not worth very much in the whole model to stimulate the intention first and then, based on theory of reasoned action (Davis, F. D., 1989), to stimulate the effective usage of the services. It appears clear that for the smartphone services users the model should be totally different from the non users. In order to support this, even if the sample of nonusers was small, it shows completely opposite result for face to face consulting that shows a very strong and positive correlation with effective usage of services.

As long as the sample was mainly composed of the smartphone services users the model should be adjusted considering all the related insights and for the model fit should be performed a structural equation analysis due to large number of dependent variables and the correlations between them.

Finally, knowing the details and having a reference base in this model used for different businesses, the researchers in telecommunications services could perform a specific approach and consistent analysis, finding the applicability of the results in the business field, rather than remaining a theoretical study. Moreover, when the field study is a company or many with national coverage, there could happen to have

even more useful results capturing the needs of those companies from the study phase and making them active part in the research, and thus, improving the gap between theory and practice.

The limitation of the study could come from the fact that the users were high level users coming from the big multinational companies that have used smartphone for a long time, the benefits include these services in the package, so that there is no service limitation and the coverage of the operators was at a high level in the regions where the study was performed.

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## **ANALYSIS OF THE RELATIONSHIP AMONG TRAINING, SKILLS AND CONTENTMENT OF THE EMPLOYERS**

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**Abstract:** Successful designing and implementation of the quality management system in an organization requires taking into account the requirements of all categories of natural persons or legal entities which have direct or indirect interests towards it. Efficiency and effectiveness of the actions carried out to meet the expectations of stakeholders shall be assessed by periodic measurements and analyses accomplished with appropriate tools for each category.

Obtaining favourable results following the measurement of contentment does not put an end to the process of relationships with the customers and stakeholders. Implementation of the process will reveal new expectations and requirements that, in conjunction with the ones existing in the Organization and in order to improve the activity will lead to strategies and policies that are intended to contribute to the continuous improvement of the relations with stakeholders.

Thus, based on previous researches undertaken internationally and nationally, we carried out two investigations which aimed to identify the employers` needs and requirements related to the quality of skills provided by universities to the higher education graduates, and measurement of their degree of adjustment to the specified or implied requirements.

In our country, the studies on employers' requirements have permanently concerned the universities. The problems identified are almost similar with those abroad, and the solutions offered by many studies have not provided the solving key but only at most an improvement of the situation.

The labour market in Romania is not structured, and there is no nationwide program for its development, but nevertheless the universities must provide the workforce for the next 3, 4 or 5 years.

The researches carried out for this purpose show that work experience is considered by employers as a main criterion, stronger than the grade of graduation or than the reputation of the university where they graduated from.

A first research - the exploratory type – has aimed through investigation to identify the following issues: the importance placed by employers on the staff selection criteria; areas in which employers have difficulties in finding staff with higher qualifications; skills that the employers would like the University to focus on, preparing additionally the graduates in this respect, and the general level of contentment in terms of the educational services quality.

A second research – both the descriptive and explanatory type – has provided information on: identifying the skills required from the higher education graduates; measuring the importance placed by employers on several groups of skills and competencies; estimating the levels of the skills achieved in some Romanian

universities; contentment survey related to other services provided by the higher education institutions in Romania.

**Keywords:** quality, higher education, contentment, requirements, employers

**JEL classification:** I25

## 1. General Introduction

Successful designing and implementation of the quality management system in an organization requires taking into account the requirements of all categories of natural persons or legal entities which have direct or indirect interests toward it.

In the latest edition of ISO 9000 these individuals or interest groups are referred to as „*interested parties*“, and in the management literature *stakeholders*. They exist both inside and outside the organization, may have personal or collective interests, may be individuals or formal and informal organizations.

Orientation of organisations towards all types of stakeholders becomes a dominant of the philosophy of total quality management as a result of the fact that their requirements and expectations are met mainly through quality.

In order to meet the demands of stakeholders, the universities should design and implement efficient and effective systems of quality management to ensure the conditions for achieving success through TQM. Efficiency and effectiveness of the actions carried out to meet the expectations of stakeholders shall be assessed by periodic measurements and analyses accomplished with appropriate tools for each category.

Obtaining favourable results following the measurement of contentment does not put an end to the process of relationships with the customers and stakeholders.

Implementation of the process will reveal new expectations and requirements that, in conjunction with the ones existing in the Organization will lead to strategies and policies that are intended to contribute to the continuous improvement of the relations with stakeholders.

Conducting surveys on employers` opinion should be a common practice of all Governments and institutions directly concerned. Thus, in the United States it was made one of the most extensive survey, *Educational Quality of the Workforce, National Employer Survey*, conducted in 1994 (Zemsky, Iannozzi, 1995). The sample included 4,000 companies with at least 20 employees (so that the respondents have the experience of the hiring process) from the private sector (the state companies and non-profit organisations have been excluded). Among other things the survey aimed to analyze the stages and criteria that the employers make use of, in the occupational selection. Respondents were asked to indicate the degree of importance of various selection criteria: professional experience, level of education, school results, reputation of the educational institution, attitude and communication skills.

In the United States other surveys have also been initiated and conducted through collaboration between higher education institutions in different states and central agencies, such as the State Departments of Education, the State Commission for Higher Education, the National Center on the Educational Quality of the Workforce, the Commission for achieving the skills required on the labor market (Secretary's Commission on Achieving Necessary skills - SCANS).

Another representative research (Clarke et al., 1996) aimed to develop an instrument by means of which employers' requirements and the necessary workforce can be analysed. The purpose of this tool was to identify the fields of activity where employers need workforce with higher education, and the level of training required by vacancies. The results showed that for about 60% of the jobs that the companies declare as vacancies, it is required workforce with higher education. Among the most requested jobs by employers there are the managerial positions, the medical field and banking-finance jobs.

## **2. Researches conducted internationally and nationally at institutional level**

At institutional level, the universities run surveys through which they try to identify: selection practices for graduates, education-related information, and candidates skills desired on the labor market. The main purpose of the surveys conducted by the educational institutions aims at analyzing employers' opinion on their own graduates. Most of the educational institutions which are concerned to ensure and provide high quality education have developed a customer-oriented policy (especially towards employers). To be more specific, we will show some of these surveys conducted by universities and then we will briefly present the most important results.

Such a survey has been conducted by the University of Sussex (*Report to HEFCE by the University of Sussex School of Education, 2006*). There have been forty-one (41) interviews, three (3) focus groups and one hundred (100) questionnaires. The work experience of candidates is the main selection criterion used by employers. As regards the importance of quality in general, namely the quality standards of educational institutions, the employers do not consider this aspect as very important, only 20% of them are turning to the information provided by the universities.

Another study conducted at institutional level includes regular surveys performed by the Palomar College in California, aiming at identifying the employers' attitudes towards graduates.

Even if the employers have declared themselves satisfied with the technical knowledge specific to the workplace, there are still several dimensions that require improvements, namely, the problem solving skills and critical thinking. In terms of behaviour, punctuality of graduates is the most favourably assessed, while the initiative is rated as the most unfavourably. Analyzing the employers' assessments for these three dimensions at the level of the surveys conducted by the educational institutions, we will note that the dimensions that need to be improved are just the general skills pertaining to attitude, pro-activity and initiative (Hodges & Burchell, 2003).

To conclude, we note that investigation-type studies aiming at the employers' opinion differ through both the coverage level (application of questionnaires to companies at local, national or international level) and the objectives which they pursue.

In our country, the studies on employers' requirements have permanently concerned the universities. The problems identified are almost similar with those abroad, and the solutions offered have not provided the key to their solving but, at most, an improvement.

The labour market in Romania is not structured, and there is no nationwide program for its development, but nevertheless the universities must provide the workforce for the next 3, 4 or 5 years.

The researches carried out for this purpose (Quality Barometer 2009) show that work experience is considered by employers as a main criterion, stronger than the grade of graduation or than the reputation of the university where they graduated from. Most employers prefer graduates who have worked either part-time (40%) or full-time (26%) in college; only 7% of the employees would prefer those who have not had a job during college. On the other hand, employers prefer Master's graduates, and if talking about the graduates with Bachelor' Degree, they prefer the pre-Bologna graduates (prevailing in both cases the duration of studies).

The Technical University of Cluj-Napoca has conducted a survey on 34 companies with the following outcomes: 48% of the participating companies require knowledge of English, 15% of them insist on experience in the workplace, while the other requirements focus on communication skills, team spirit and a willingness to learn.

A study at the University of Oradea conducted in 2011 on 39 companies with 3,700 employees (many of them being graduates of the University), had as objectives:

- assessment of the employers` degree of contentment regarding the graduates of the University of Oradea,
- identification of shortcomings in the study programmes (curriculum) of the University of Oradea, and making recommendations to remedy them

The outcomes show that employers are definitely pleased with the theoretical knowledge of the graduates from the University of Oradea, Romania. With regard to the poor skills and abilities of those who own diplomas issued by the University of Oradea, the employers bring most often a charge to low practice in the field (29% insufficient and satisfactory) and to the lack of resistance to stress and pressure (28.2% insufficient and satisfactory).

In the context of launching the National Framework of Qualifications in Higher Education, we have had the opportunity to present the outcomes of the study "Recent Graduates of Higher Education and Their Integration in the Labour Market", an achievement of the UECNCFPA. The sample under investigation includes 5576 graduates from over the past five years, a number resulting from a fruitful collaboration with the employers who have previously sent us a list with the graduates from our university employed by their companies; in turn, these graduates have facilitated the access to other graduates. Also, we have obtained 4,000 of responses from the employers and other workforce recruiters have been inquired on the topic. One of the study's findings is that "both employers and graduates consider that, at the moment, the higher education system provides graduates with the theoretical knowledge they need, but fails to provide practical skills. There is a difference between what the universities are able to provide and the workplace requirements".

Prioritizing the curricula based solely on research-centered indicators has led to penalization of the knowledge-oriented universities education, underfunding them. However, the number of students will still remain an important element of survival. Prisoners of the certification culture, the student is still concerned with completing a degree, and less with the accumulation of knowledge and acquisition of skills.

### 3. Research regarding awareness on employers` requirements in terms of the skills provided by universities

The research problem aims at identifying the employers` needs and requirements related to the quality of skills provided by universities to the higher education graduates, and measurement of their degree of adjustment to the specified or implied requirements. The following issues have been taken into account:

- the criteria used by employers in the recruitment process;
- employers` requirements concerning the skills to be formed upon graduates through educational services;
- fields and specializations in which employers are experiencing difficulties;
- ranking made by the employers for the core skills that graduates must have;
- available jobs for the young graduates

In our country the employers' perception is that there is a significant gap between the graduates` skills required and current level.

Most scholars credit the University system with much or very much confidence in terms of its ability to provide high-quality graduates on the labour market

A first research - the exploratory type – has aimed through investigation to identify the following issues:

- the importance placed by employers on the staff selection criteria;
- areas in which employers have difficulties in finding staff with higher qualifications;
- skills that the employers would like the University to focus on, preparing additionally the graduates in this respect;
- the general level of contentment in terms of the educational services quality.

The analysis sample is composed of 220 companies represented by the senior staff involved in the recruitment and selection of personnel.

In a first stage we have aimed to identify the main criteria for the selection of staff that employers take into account in the selection process, regardless of the origin of candidates (fresh graduates or people who already have a previous practical experience). For this purpose, we have made available to employers a list of criteria, asking them to specify how important in the selection process such criteria are, on a scale from 1 to 5.

**Table 1: Assessing importance of the criteria used in the selection process (grades on a scale from 1 to 5) (average grades)**

Position	Selection Criteria	Grade
I	Candidate`s motivation, attitude towards work	4,61
I	Motivation and interest in the work	4,61
I	Conscientiousness, reliability	4,60
I	The honesty and trust the candidate inspires	4,60
I	Willingness to learn new things, openness to change	4,55
I	Practical skills (what he can do)	4,47
I	Candidate optimism, positive attitude	4,44

Position	Selection Criteria	Grade
I	General Skills and Competences (communication, teamwork)	4,43
I	Pro-active, solution-oriented	4,40
I	Matching the nature of the candidate with the job	4,39
II	Promptness, organization and efficient use of time	4,34
II	Computer Skills	4,30
II	Candidate's enthusiasm, his dynamism	4,28
II	Self-control, calm, patient nature	4,26
II	Personality traits, character	4,23
II	Matching the nature of the candidate with the organization	4,22
II	Strength and ability to work under pressure	4,19
II	Results from tests / applications / practical tests / interview questions during the selection process	4,15
II	Desire to have a career, to promote	4,14
II	The general level of intelligence	4,12
III	Mature and professional attitude	4,02
III	Job specific knowledge	4,00
III	Language skills (knowledge of foreign languages)	4
III	Interview overall performance of the candidate	3,87
III	Graduated specialization (matching the field of study with the job)	3,84
III	Candidate's job expectations	3,84
III	Specialized theoretical knowledge of the candidate	3,82
III	Quality of the educational institution graduated	3,80
III	Knowledge specific to the company's field of activity	3,80
III	Professional results obtained in the previous place of work	3,80
III	Management skills, leadership	3,79
III	Candidate's level of higher education (Bachelor Degree)	3,78
III	Negotiation skills	3,77
IV	Neat appearance of the candidate	3,67
IV	Recommendations you received about the candidate from people you know	3,64
IV	Work experience in the business of job	3,55
IV	Results obtained in college (grades, general average, Olympics)	3,49
IV	Training and extracurricular activities, volunteer activities	3,49
IV	Recommendations from teachers	3,47
IV	Letters of recommendation from former employees	3,38
IV	Elective courses you attended during college	3,35

Position	Selection Criteria	Grade
IV	Willingness to work overtime	3,35
IV	Degree of selectivity at admission of the university graduated	3,34
V	Salary solicited by candidate	3,31
V	Master diploma	3,15
VI	Work experience, but for unskilled positions / unrelated with the job	2,59
VII	Appearance of the candidate (how attractive he is)	2,29

A second research – both the descriptive and explanatory type – has provided information on:

- identifying the skills required from the higher education graduates;
- measuring the importance placed by employers on several groups of skills and competencies;
- estimating the levels of the skills achieved in some Romanian universities;
- contentment survey related to other services provided by the higher education institutions in Romania.

The analysis sample is composed of 268 companies represented by the senior staff involved in the recruitment and selection of personnel.

The difference between the number of respondents who have filled in the first questionnaire and those who have filled in the second is explained by the fact that the two questionnaires have been distributed at different times and the number of participants has been fluctuating.

Firstly, after assessing the importance of skills and the degree of meeting the requirements for each skill and skill group we can appreciate the degree of adjustment of the educational services quality to the employers' needs. Based on the importance placed on each group of skills we can achieve a ranking of the skills from the employers' point of view. We find that the average level of contentment regarding the adjustment of educational services to the demands and expectations of employers is less than 75% for all the skills, ranking at a very low level within the group "involved in the execution of their tasks" (such group being on the 2nd place in terms of importance).

**Table 2: Degree of Meeting Requirements, in terms of Graduates Skills**

Place	Groups of Skills	Importance factor	Degree of meeting	Degree of not meeting
1	Interpersonal relationships	0,0938	62,34	37,66
2	Involvement in fulfilment of tasks	0,0897	36,4	63,6
3	Communication	0,0889	60,72	39,28
4	Other skills	0,0885	74,22	25,78
5	Teamwork	0,0862	67,46	32,54
6	Adaptability	0,0859	53,96	46,04
7	Systemising skills	0,0857	37,2	62,8

Place	Groups of Skills	Importance factor	Degree of meeting	Degree of not meeting
8	Initiative	0,0839	49,92	50,08
9	Mode of work	0,0815	64,28	35,72
10	Foreign Languages	0,0776	59,66	40,34
11	Results Presentation	0,0692	67,58	32,42
12	Knowledge	0,069	58,02	41,98

In order to adjust skills to the employers` needs, it is necessary to:

- a) analyse the skills in order of importance or in order of increasing the degree of contentment provided to employers. For instance, in the skills group "involved in the execution of their tasks" have been included:
  - identifying new methods for achieving goals
  - finding solutions to reduce costs
  - finding solutions for reducing the time for reaching a goal
  - finding solutions to improve quality
- b) if we consider the skills included in this group, afterwards we have to see, separately per fields and specializations, which are disciplines that contribute to the achievement of the respective skills and what improvements should be made to such disciplines in order to meet employers' expectations.

Secondly, following a survey among employers it has been revealed that there are several fields of activity and specialization for which they face difficulties in finding higher education workforce, namely:

- Technical
- IT Programming
- Business
- Management
- Finance
- Trade – Sales
- Administrative
- Communication – Public Relations
- Marketing
- Accountancy

Thirdly, we have identified the core skills which the University has to focus on in the educational process of its graduates, namely: communication, practical skills, management, IT, teamwork, analytical thinking, etc.

Distinctly, one has also to consider the improvement of collaboration of universities with the business environment by involving specialists in consulting activities.

The second part of the research aimed to identify the employers' contentment with the quality of graduates from several universities, reflected by the extent to which graduates meet the requirements specified above. The following universities are under study:

- "Gh. Asachi" Technical University of Iași
- "A.I.Cuza" University of Iași
- "Gr. T. Popa" Iași University of Medicine

- West University of Timișoara
  - Academy of Economic Studies București
- Employers' contentment reflects, in fact, the degree of adjustment of educational services provided by universities to the needs and requirements of employers.

**Table 3: Summary of the assessments on ensuring the graduates' skills**

Skills	Importance factor	Percentage of the employers who consider the group of skills as being very important and important (%)	Degree of ensuring the required skills (%)				
			Technical University "Gh. Asachi" Iasi	"A.I.Cuza" University of Iasi	Iasi University of Medicine	West University of Timisoara	AES Bucharest
<b>Knowledge</b>	0,069	42,7	72	46	83	80,8	8,3
<b>Systemising skills</b>	0,0857	53	50	51,2	0	73	11,8
<b>Mode of work</b>	0,0815	50,4	60,8	56,5	100	90,1	14
<b>Involvement in fulfilment of tasks</b>	0,0897	55,5	50	38,7	0	83,3	10
<b>Initiative</b>	0,0839	51,9	50	35	100	58,1	6,5
<b>Adaptability</b>	0,0859	53,1	50	38,1	100	71,7	10
<b>Communication</b>	0,0889	55	25,3	65	100	83,3	30
<b>Interpersonal relationships</b>	0,0938	58	50	51,9	100	83,3	26,5
<b>Teamwork</b>	0,0862	53,3	50	47	100	83,3	57
<b>Results Presentation</b>	0,0692	42,8	50	53,6	100	80,2	54,1
<b>Foreign Languages</b>	0,0776	48	50	55	100	83,3	10
<b>Other Skills</b>	0,0885	54,7	82	68,7	100	91,7	28,7
			53,03	50,92	72,9	82,33	22,5

#### 4. Conclusions

General appreciation of the quality of higher education in Romania is above average at the universities that provide a general or technical education, but the appreciation is different for public and private education, at the expense of the latter.

Regarding the importance placed on the staff selection criteria, motivation ranks the first, followed by the criteria that reflect the quality of the person and then the work engagement.

Although 54,55% of the respondents say that their company offers jobs for fresh graduates, many companies have difficulties in finding personnel with higher education in the following areas: technical (30,77%), IT programming (30,77%) and Business (25,64%).

When selecting graduates, it is placed great and very great emphasis on: candidate's behaviour at the interview, quality of the educational institution attended, grades during studying years, knowledge, skills and experience. It is placed less importance on the diploma of master.

More than half of the respondents (51,11%) consider that in the selection process, the salary required by the candidate is an important and very important criterion.

There are also very important: conscientiousness and reliability, self-control, candidate's optimism, honesty and confidence, willingness to learn new things, openness to change, and communication and negotiation skills.

We have also identified the core skills which the University has to focus on in the educational process of its graduates, namely: communication, practical skills, management, IT, teamwork, analytical thinking, etc.

The academic world stays still concerned with its own financial survival, in a continuous search for ways and milestones related to the orientation of graduates

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# MARAMUREȘ WORKFORCE COMPARED TO THE REST OF THE NORTH-WEST REGION

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**Abstract:** *This paper presents aspects regarding population and workforce in Maramureș County, compared with the situation recorded in the region to which it belongs, i.e. North - West, at the end of 2010. The paper is aimed at all those interested in these issues. Besides Maramureș County, the North - West Region also includes the counties of Bihor (BH), Bistrița-Năsăud (BN), Cluj (CJ), Satu Mare (SM) and Sălaj (SJ). Maramureș is known for its wooden churches, its rural architecture, its old traditions - preserved until today - its craftsmen and its impressive landscapes. This paper is based on statistical information provided by the National Institute of Statistics, Department of Statistics in Cluj. In March 2013, the latest data available are those relating to the end of 2010. Thus, based on this information, it pinpoints the fields in which the people in Maramureș are employed at this date, compared to other counties in the region, the wages they get, and the contribution to the county and regional GDP. It also compares labor resource, active civil population and employed civil population, unemployed. After 1989, Maramureș County, as well as the entire North - West Region, underwent major changes. Population decreased from year to year, however the lack of jobs has become a constant reality. The mining of ore, the processing of metals other than iron and the auto industry, which used to cover most of the jobs in Maramureș, entered into a continuous decline, which culminated in the closure of all mines in the county. In this situation, adapting to the new conditions, the current economic reality, is a daily problem for the people of this county. We will try to determine in which fields the people of Maramureș are currently working in, compared to the residents of the other counties in the region, which are their wages and what the contribution to the regional and county GDP is. We will also see the state of the labor resource, the active civil population, the employed population and the unemployed.*

**Keywords:** *workforce, employed population, unemployed, Maramureș.*

**JEL classification:** *J11, R11, R23.*

## 1. Introduction

In order to establish itineraries, you must know where you are and only then where you are going. To establish development strategies you must know exactly where the studied area lies from an economic, social and cultural point of view. Only a correct localization ensures an appropriate strategy. Thus, we shall try to establish the position of Maramureș County in terms of population and labor force in the year 2010.

Maramureș County (statistically classified in NUTS 3) is part of the North - West Region (NUTS 2), which in turn is part of Macro-region 1 (NUTS 1).

Maramureş is known for its wooden churches, its rural architecture, its old traditions - preserved until today - its craftsmen and its impressive landscapes.

After 1989, Maramureş County, as well as the entire North - West Region, underwent major changes. Population decreased from year to year, however the lack of jobs has become a constant reality. The mining of ore, the processing of metals other than iron and the auto industry, which used to cover most of the jobs in Maramureş, entered into a continuous decline, which culminated in the closure of all mines in the county. In this situation, adapting to the new conditions, the current economic reality, is a daily problem for the people of this county.

Much of the county remained non-industrialized in the communist period, so that traditional agriculture is at home in this part of the world.

The county seat is the city of Baia Mare, around which the ore mining industry developed before 1989. This greatly polluted the city in the past, but now, due to the decline of the industry, the area is much less affected.

Besides Maramureş County (MM), the North – West (NW) Region also includes the counties of Bihor (BH), Bistriţa-Năsăud (BN), Cluj (CJ), Satu Mare (SM) and Sălaj (SJ).

We will try to determine in which fields the people of Maramureş are currently working in, compared to the residents of the other counties in the region, which are their wages and what the contribution to the regional and county GDP is. We will also see the state of the labor resource, the active civil population, the employed population and the unemployed.

## 2. Maramureş workforce, compared to the rest of the North-West Region, in 2010

The area occupied by Maramureş County is 6674 km<sup>2</sup>, as can be seen in Table 1.

**Table 1:** The area of the counties in the NW Region

Indicator	NW Region	BH	BN	CJ	MM	SM	SJ
Area - km <sup>2</sup>	34159	7544	5355	6674	6304	4418	3864
Percentage of the area in the total area of the Region - %	100	22.08	15.68	19.54	18.46	12.93	11.31

Source: *Wikipedia The Free Encyclopedia, Nord – West Development Region*, [Online]. Available: [http://en.wikipedia.org/wiki/Nord-Vest\\_\(development\\_region\)](http://en.wikipedia.org/wiki/Nord-Vest_(development_region)) [March 15, 2013]

The county is in 3rd place when it comes to its area within the Region, the first two being Bihor and Cluj.

In terms of population, Maramureş takes the 3rd place, both in terms of number of inhabitants (being surpassed by Cluj and Bihor) and in terms of density (being surpassed by Cluj and Satu Mare), as can be seen in Table 2.

**Table 2:** Population and density of the counties in the NW Region

Indicator	NW Region	BH	BN	CJ	MM	SM	SJ
Population –no. of inhabitants	2716456	592561	317247	691048	510482	364104	241014
Percentage of the population in the total population of the Region - %	100	21.81	11.68	25.44	18.80	13.40	8.87
Density (inhabitants/km <sup>2</sup> )	79.52	78.55	59.24	103.54	80.98	82.41	62.37

Source: Cluj Regional Department of Statistics (2013), *Regional statistics*, [Online], Available: <http://www.cluj.insse.ro/cmscluj/rw/pages/statReg.ro.do> [March 15, 2013]

According to data provided by the National Institute of Statistics on July 1, 2010, the share of urban population in Maramureş County is 58.82%, atypical for an area known for its ancient traditions preserved until today especially in rural areas. In the NW Region, the percentage is 53.26%, and so Maramureş ranks 2nd after Cluj with 66.42%. The reason for this is related to the period before 1989, when the development of the mining industry led many county residents to move to urban areas in the hope of a better life. Thus, they created settlements around mines which have since become towns. Such towns are Baia Sprie Cavnice, Borşa, Tăuţii Măgherauşi, Vişeu de Sus. In addition, the county has the highest number of cities - 13 (of which 2 municipalities) - followed by Bihor with 10 cities (including 4 municipalities), Cluj and Satu Mare with 6 cities each. The large number of cities in the county explains the relatively high share of urban population compared to the regional average.

According to the same information, in the Region, the population over 60 has a share of 19.44%. In Maramureş, the degree of aging of the population is below the regional average, people over 60 representing 18.125% of the total population. The county ranks 2nd after Satu Mare, which has a share of 17.44%. An explanation for this situation could be related to life expectancy, which in 2008-2010 was 72.93 years, ranking Maramureş in 3rd position after Cluj and Bistriţa-Năsăud and below the region average which is 73. In addition, except for Bistriţa-Năsăud, the other counties of the Region have a negative natural growth, so that aging will increase in the future. With regards to workforce, the situation is presented in Table 3.

**Table 3:** Average number of employees at end of 2010

Indicator	NW Region	BH	BN	CJ	MM	SM	SJ
Average no. of employees – no. of people	573728	146551	51823	178649	86256	71056	39393
Percentage of employees in the total population - %	21.12	24.73	16.33	25.85	16.90	19.52	16.34

Source: Cluj Regional Department of Statistics (2013), *Regional statistics*, [Online], Available: <http://www.cluj.insse.ro/cmscluj/rw/pages/statReg.ro.do> [March 15, 2013]

The number of employees in Maramureş County is 86256 people (Cluj Regional Department of Statistics, 2013), at the end of 2010, ranking in the 3rd position in the Region, after Cluj and Bihor. But in terms of the percentage of employees in the total population, the county recorded a value of 16.90%, well below the regional average of 21.12%. From this point of view, the county ranks 4th, but at a rather small distance from the last two (Sălaj and Bistriţa-Năsăud). Reasons for this could be related to unregistered employment, subsistence economy, work abroad or smuggling (alcohol, tobacco, wood).

The average number of employees, by activity, in the national economy in 2010 is shown in Table 4.

**Table 4:** Percentage of employees, by activity, in the national economy in 2010

- % -

Field	NW Region	MM
Economy as a whole	100	100
Agriculture, forestry and fishing	1.53	1.55
Industry	32.24	37.12
of which:		
▪ Mining	0.72	0.41
▪ Manufacturing	28.37	34.14
▪ Production and supply of electricity, gas, hot water and air conditioning	1.11	0.76
▪ Water supply, sanitation, waste management and decontamination activities	2.04	1.80
Construction	7.12	7.11
Wholesale and retail trade, repair of motor vehicles and motorcycles	17.34	14.55
Transport and storage	5.44	4.37
Hotels and restaurants	2.40	2.37
Information and communication	1.72	0.92
Financial intermediation and insurance	1.85	1.67
Real estate	0.56	0.31
Professional, scientific and technical activities	2.26	1.21

Field	NW Region	MM
Administrative services and support services	2.53	2.05
Public administration and defense, social security	3.95	4.33
Education	9.96	10.57
Health and social care	8.85	9.29
Arts, entertainment and recreation	1.12	0.93
Other services	1.13	1.65

Source: Cluj Regional Department of Statistics (2013), *Regional statistics*, [Online], Available: <http://www.cluj.insse.ro/cmscluj/rw/pages/statReg.ro.do> [March 15, 2013]

Most employees in Maramureş are working in industry, namely 37.12%, above the average for the region which is 32.24%. The county occupies first place in the Region from this point of view. Most of these employees work in manufacturing. In 2010, the mining industry, which dominated the landscape before 1989, has only 0.41% of the total number of employees of the county.

In public administration, education and health, Maramureş also has more employees than the regional average. Agriculture and construction lie approximately at the average of the NW Region. In other areas, Maramureş is below the regional average. Thus, we consider that there is potential for development in tourism, transport and trade.

Regarding the future, projections show that by 2013 the demand for labor will be oriented towards (Maramureş County Agency for Employment, 2011):

- services;
- construction;
- trade;
- transport - storage - communications;
- hotels and restaurants.

Services will be, in the next period, the main generator of gross added value in the national economy. With an average annual growth rate of 6% in 2007-2013, the third sector will be, after construction, the most dynamic sector. With a share that is around 50% of the GDP and a constant growth rate, the services sector will, in the next period, be the largest contributor to a true GDP growth (Zima, 2008: 568).

The number of registered unemployed in Maramureş at the end of 2010 was 12490 persons (Cluj Regional Department of Statistics, 2013). Of these, 56.07% are men. Among them, the unemployment rate in late 2010 was 6.3%, below the average regional rate which was 6.5%. Among women, the unemployment rate was 5.7% at the end of 2010, a percentage that is above the regional average of 5.3%.

So, we consider that unemployment affects women in the county more than it does men. But the overall unemployment rate in Maramureş in late 2010 was 6%, above the regional average rate of 5.9%. The percentage of unemployed is increasing from year to year, especially among young people. One of the reasons for this is the poor correlation between the educational system and labor market demands.

At the end of 2010, from the total county population of 510500 inhabitants, according to the labor balance published by the National Institute of Statistics, the labor resource was 331.7 thousand persons and civilian labor force 200.3 thousand, as shown in Table 5.

**Table 5:** Workforce at the end of 2010

- Thousand people -

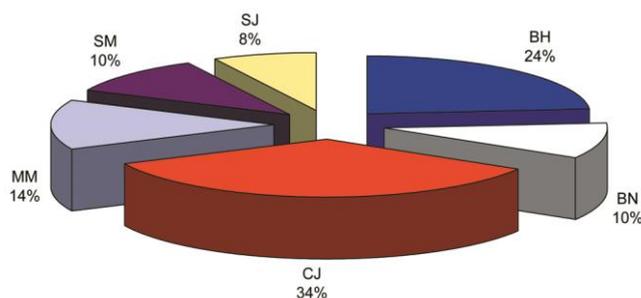
Indicator	NW Region	MM
Total population	2716.5	510.5
Labor resources	1764.4	331.7
Employed population	1109.0	187.4
▪ of which employees	573.7	86.3
Unemployed	78.6	12.9
Civilian labor force	1187.6	200.3
Population in training and other population categories	576.8	131.4

Source: National Institute of Statistics (2011), *Labor balance on January 1, 2011*, [Online], Available: <http://www.emplonet.ro/wp-content/uploads/2012/03/Balanta-fortei-de-munca.pdf> [March 24, 2013], ISSN: 2067-0311, ISSN-L: 1584-7837, pp. 43, 51

Of the total employed population of 187400 people, only 86300 were employees, i.e. 46.05%. The regional average was 51.73%, while the percentage in Cluj County was 58.10%. Thus, the county ranks 4th after Cluj, Bihor and Satu Mare. Last class is Sălaj with a percentage of 41.91%. In Maramureș the difference between the employed population and actual employees is 101100 people. They either work in subsistence agriculture or on their own.

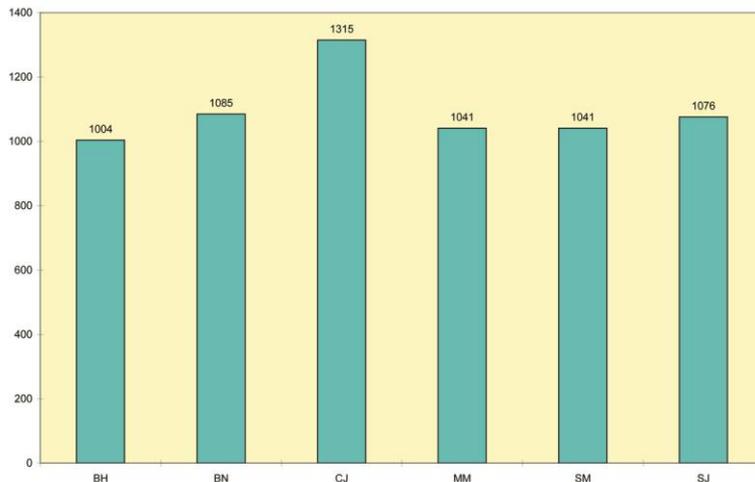
Under these circumstances we can conclude that most of the inhabitants of the county, of those employed, are working in agriculture, a field with the lowest income. The employment rate of labor resources in Maramureș is 56.50%, well below the regional average of 62.85%. Regarding the activity rate of labor resources in Maramureș, it was 60.39%, well below the regional average of 67.31%.

To date, on the website of the Cluj Regional Department of Statistics, only data on the GDP for 2008 have been published. Thus, Maramureș made in 2008 a GDP of 7998.5 million lei current prices. In the same year, the Region's GDP was 57937.1 million lei current prices. In Figure 1 we can see the contribution of each county in the Region to the GDP.

**Figure 1:** The contribution of each county to form Regional GDP in 2008

Source: Cluj Regional Department of Statistics (2013), *Regional statistics*, [Online], Available: <http://www.cluj.insse.ro/cmscluj/rw/pages/statReg.ro.do> [March 15, 2013]

The greatest contribution is brought in by Cluj County, mainly due to the presence of Nokia and MOL Romania on the Romanian market. The economy of this county is over 4 times more powerful than the lowest ranked county, Sălaj. Bihor came in second place, followed by Maramureş. Compared to Cluj, Maramureş economy is 2.5 times weaker. In this area, the main business is Eaton Electro Romania, producing low voltage electrical equipment and automation solutions. Thus, within the Region, there are major economic development discrepancies between the counties (Cluj and Bihor are more stable, economically, compared to the other), discrepancies highlighted by the level of participation of each to the regional GDP. In terms of the monthly net average nominal wage for the total economy, the situation in the Region in 2008 is shown by Figure 2.



**Figure 2:** The monthly net average nominal wage for the total economy in each county in the Region in 2008

Source: Cluj Regional Department of Statistics (2013), *Regional statistics*, [Online], Available: <http://www.cluj.insse.ro/cmscluj/rw/pages/statReg.ro.do> [March 15, 2013]

Maramureş occupies the first place in terms of monthly net average nominal wage only in agriculture, hunting and forestry, with 890 lei/employee, the Regional average being 847 lei/employee. However, less than 2% of the employees in Maramureş work in this field. In industry, where the county has the most employees, the wage is 843 lei/employee. With this value, it is ranked last, the regional average being 987 lei/employee. When it comes to trade and health, the county ranks 2nd in this regard. In other fields the county has intermediate ranks - 3, 4 and 5 - compared with other counties in the Region, according to information provided by the Cluj Regional Department of Statistics.

### 3. Conclusions

Maramureş County ranks 3rd in the Region both in terms of area and number of inhabitants. It has a majority urban population, explained by the large number of existing cities (13), compared to other counties.

Maramureş generally takes the 3rd or 4th place in most indicators studied, so that

in the North - West Region it is located approximately in the middle.

Before 1989, mining, the processing of metals other than iron and the auto industry recorded most employees, the labor resource in the county being mostly engaged in these fields.

In 2010, most of the people in Maramureș were employed in manufacturing, while mining only had 0.42% of all employees.

However, the average nominal monthly net wage for the total economy is quite low in this region.

The number of employees is low relative to civilian employed population.

There are over 100000 people working in subsistence agriculture, on their own, unregistered employees or are working abroad.

Also, from the analysis of the number of employees in the national economic activity, it was found that in the county there is potential for development in tourism, transport and trade. Workforce training should be therefore linked to these perspectives. Moreover, the poor correlation between the educational system and the labor market demands is considered one of the main problems. But correlating the educational system with the requests on the labor market is a very complex issue. From the moment the labor market calls for a particular qualification a certain period of time is necessary (which is all the greater as the job has a higher degree of specialization) until the education system is able to provide specialists in that field.

Nevertheless, we believe that the biggest problem is the lack of a broad culture on professional orientation.

There is also a high degree of subjectivity regarding the professional future imposed by the need to make decisions at the age of 15, when choosing a high-school.

Under these circumstances, a solution for the labor market would be thinking like an American employee, who is more willing, regardless of his age, to change his job or career.

Yet another solution is continuous training, which must be part of the daily life of any employee.

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## APPROACHES TO QUALITY MANAGEMENT AT EUROPEAN LEVEL

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**Abstract:** *In the current economic context, quality has become a source of competitive advantage and organizations must perceive quality as something natural and human in order to achieve excellence. The proper question for the context of the internationalisation of the economy is whether the culture of the regions, states or nations affects the development in the quality management field and the quality approach. The present study tries to give a theoretical approach of how culture influences the quality approach at the European level. The study deals only with the European quality approach, because at European level one could meet a great variety of models and methodologies. In the U.S.A. and Japan one could identify a specific cultural approach regarding quality. At the European level, we cannot discuss in the same terms, because each country has a different cultural specifics in terms of quality. In order to determine the cultural specificity of the countries surveyed, the study has used the most popular analysis tool of cultural dimensions, namely the Dutch Professor Geert Hofstede's model. The model illustrates according to a survey, the organizational behavior of several countries and was able to identify a set of variables and fundamental dimensions, that differentiates one culture from another. An attempt was made to see if there are connections between the values of Hofstede's cultural dimensions and the quality characteristics in the analysed countries. The study, describes on the one hand, the quality evolution from quality control to Total Quality Management and on the other hand, focuses on the quality approach modalities at European level. The second part of the paper is structured into two parts, addressing on the one hand the quality in countries of Western Europe, such as United Kingdom, France and Germany, because these three countries are considered to be the exponents of quality development in Western Europe. In the same time, the paper seeks to explore the quality approach in Eastern Europe, with a brief analysis of cultural context and quality development in Romania.*

**Keywords:** *quality, total quality management, quality culture, quality and cultural dimensions, European quality, Hofstede's model and quality*

**JEL classification:** M14; P52

## 1. Introduction

According to Tito Conti, the quality is first a cultural aspect and then a technical aspect, which means that in terms of cultural diversity the quality makes no exception. The same author argued that one cannot speak of a "European or American quality" (Conti, 1993). However, the reality confirms that there are major differences between nations, states, regions and even between organizations in the same area. These differences are the result of patterns of thoughts, feelings and potential events that tend to develop in general groups of individuals. These patterns of manifestations specific to certain groups of individuals, are called culture, seen from the viewpoint of social anthropology. Geert Hofstede defined culture as "the collective programming of the thought, which distinguishes the members of a certain group of members of another group." (Hofstede, 2010: 16).

The culture influences the entire social life, being decisive for the economy, for the management and for the quality approach.

In this context, we can say that the quality dimensions in certain nations varies greatly, for example, Germany is a great authority with regard to the production of high quality goods, France has a reputation for the wines' quality, the Northern European countries are known for the very high standards of offered services and Norway for the high level for the quality of life, according to a study by the Organisation for Economic Co-operation and Development (OECD, 2012). The examples may be continued with reference to Switzerland, which is recognized for its high quality of banking services and Italy for the quality of fashion and luxury products.

One can emphasize that Europe, particularly Western Europe, has made and continues to make major breakthroughs in the field of quality excellence in the past 20 years. (Beckford, 1998). This is determined in large part by the competition pressure exercised by other world powers: the United States, Japan and the Republic of China. Regarding this specific fact Juran specifies that, until the end of the 1980s the major European corporations resorted to specialists outside Europe for planning strategies for the total quality management systems. The situation changed in the late 1990s when both the corporate sector and professionals are well positioned in this domain, in comparison with the United States and Japan (Juran, 1999).

## 2. From quality to Total Quality Management

In an attempt to answer the question "what is quality?", the experts have not agreed to provide a generally accepted answer, because each individual has a different opinion about what it should mean a product or a service.

In an attempt to define quality, one of the masters of quality, namely Juran offers two different meanings of the term as:

- "quality means those characteristics of the products which satisfy the customers' needs and ensure their satisfaction" (Juran, 1999)
- "quality means lack of deficiencies, i.e., the absence of errors that require reprocessing or are the results of accidents, customers' dissatisfaction, customers' complaints, etc." (Juran, 1999)

These two Juran approaches, highlight the idea that the quality goal is to provide greater customer satisfaction, and to avoid wastage of all kinds: financial, image, etc. The purpose is to increase competitiveness, which determines increased profits.

The quality attempts to answer the following question: why an organization, regardless of their field of activity, economic organization must be concerned to improve continuously the quality of the products and services they offered? One of the answers could be that due to an increasing competition at national and international level, quality is a source of sustained competitive advantage.

Another author, Sandholm (1996) identifies five phases of quality in the manufacturing companies:

The first phase, called "*drowsiness phase*", in which companies do not feel threatened, the competition is weak or even non-existent, and the company obtained an acceptable profit. In these circumstances, the quality has not received attention from the company.

In the second phase, called the "*wake-up stage*", the company's situation completely changes from the previous phase. The company start to lose the position on the market, which means lower profits. In this phase the company realize that lies in the midst of a crisis.

"*The wobble*" pahse, in which the company realizes that something needs to be changed. It's a phase of trials, of searching quality management tools in order to change something.

"*The Action Phase*", is a phase in which the company may notice that the used instruments make significant changes. It is the phase in which there is a change in organizational culture in order to improve the manufactured products.

"*The Maturity Phase*", is the phase in which the total satisfaction of the customer is obtained through the perfection of every level in the organization. Quality does not apply only to products but to all activities of the organization. A total quality approach, in which the company regards quality naturally.

### **3. Approaches to quality in Europe**

#### **3.1. Culture and quality**

It is generally accepted the opinion, that total quality management is a philosophy, a model of organizational culture, which aims to a client-orientation of all activities and processes in the organization and to their optimization in order to achieve long-term benefits (Dragan, 2012). The organizational culture determines the individuality of your organization and its' mode of operation. Every organization has different expectations in comparison with others. A simplistic organizational culture can be defined as "the way you do in the organization". McLean and Marshall (1993) defines organizational culture as "a set of values, traditions, procedures, concepts and attitudes that create the context of the work of the organization". Hofstede's cultural dimensions studied in over 70 countries, through the investigation of over 116000 employees local subsidiaries of IBM concluded that major cultural differences between companies can be described in terms of five dimensions:

- *power distance*: how relationships between people with different status are handled ;
- *individualism*: so far as relations between people are few and sensitive;
- *masculinity*: the extent to which the roles of women and men differs in a society;
- *uncertainty avoidance*: the extent to which the individual is afraid of what is different and act to avoid any unclear situations;

- *long-term orientation*: how is understandable and manageable time. (Lungescu, 2005)

### **3.2. Quality Approach in Western Europe**

During the 1950s-1970s in Western Europe the quality was considered a matter of priority due to high-tech sectors such as nuclear energy, space, defence, industry, etc. As evidence for the growing interest given to quality, and in particular to statistical control of quality, was the founding of national associations for quality in many European countries. In the field of consumer goods appeared certain brands, that have distinguished themselves through the high level of product quality, creating a rule, which says that higher quality means a higher price. (Tomusk, 2000)

A major step in the progress of the quality development in Western Europe, was moving from the evaluation of preventive inspection of the quality systems of suppliers, which was determined by the needs of the defence sector through the introduction of NATO standards. Thus, in the early 1980s the quality was perceived as conformity to standards, but in the late 1980s began to show a new concept based on continuous improvement, focus on customer needs and control of business processes. (Juran, 1993).

#### **3.2.1. Quality in United Kingdom**

Cultural characteristics of Great Britain determined on the basis of the values recorded by Hofstede's model are the following (Hofstede, 2010: 64, 99,142,188):

- a lower power distance with an index of 35
- strong individualism, with an index of 89
- emphasized masculinity, with an index of 66
- acceptance of uncertainty, with an index of 35

The British management principles are: respect and admiration for what has been good in the past, individualism of the human personality, where the middle class is a resource to promote the managerial functions.

Regarding the organisation, it is to observe decentralised, and flexible structures, with little control. The company produce and sell products under their own brands, there is a very strong specialization. There is also a clear differentiation of the categories of personnel from various hierarchical levels, managers coming mainly from the middle class. The focus is rather on personality, than on training and managers are coming from social fields and lately is given more attention to financial and marketing areas. The main feature of British managers, is the priority for interpersonal skills ability to influence others and to negotiate: charismatic leadership and hierarchical relationship is least authoritative in Europe (Warner, 1997).

From the viewpoint of organizational culture, British organisations resemble the American, with the observation that the British management has retained some elements of "managerial archaism" as well as the use of empiricism, of rudimentary instruments in order to motivate people and of short-term vision etc. As strengths, flexibility must be mentioned, as well as fairplay, competitive importance given to decentralisation and human personality. (Lawrence & Edwards, 2000).

The main feature of the quality approach in the United Kingdom, is the focus on standards and certification, but this issue should not be seen necessarily as having a negative impact, United Kingdom being among the first European countries to implement the total quality Management concepts for the companies in the most

competitive areas. However, Juran (1999) notes a remarkable fact with respect to the level of certification and standardization, namely standardization and certification were also a significant note of the image he cultivated in United Kingdom with regard to the quality of its products. In this sense, in the period 1970-1990 United Kingdom had more certifications than the rest of the European countries at one place. Thus, at the time when the total quality management philosophy appeared, it has created a major disconnection between these two types of approaches to quality assurance. However, there is a reason, that caused this deep focus on standards, namely, the policies imposed by the customers, a great example of this being the Ministry of defence. This dissension, has generated a situation in which the standards-based quality approach was focused on quality assurance and control, losing orientation for the consumer focus. The Total Quality Management approach was taken in the other extreme, focusing deeply on the consumer and thus losing control of the quality control. This significant divergence between ways of British quality approach was formalised at the time the British Quality Association, which have a total quality management approach was separated in 1992, from the Institute of Quality Assurance, which had a standards-based quality approach and which was considered to be since the symbol of quality in the United Kingdom. Formally, the separation was made on behalf of the Organization of the British Prize for quality, which was based on European quality award model oriented on the Total Quality Management. In reality the separation marked the approach differences between total quality management and the traditional British quality approach (Juran, 1999). It can be asserted that the principles that characterize the culture of British culture in general and the British management in particular, is respect and admiration for what proved to be good in the past. Further, the British culture characteristic dimensions influenced significantly the quality development in the United Kingdom. Cultural characteristics such as fairplay , Britain needs to be fair and dignified, could explain the need for the quality standardization approach and reluctance towards a new approach to total quality management.

### **3.2.2. Quality in France**

Cultural characteristics of France, determined on the basis of the values recorded by Hofstede's model are the following (Hofstede, 2010: 64, 99,142,188):

- power distance, with an index of 68
- individualism quite pronounced, with an index of 71
- balance between femininity and masculinity with an index of 43
- strong uncertainty avoidance with an index of 86

It can be inferred from the above mentioned idea, that French society is a conservative one, and some of these values have perpetuated at the level of organizations, so that the French management relies on a mix of bureaucratic and aristocratic elements. (Lawrence & Edwards, 2000).

The French management principles are: dirigisme of state, individualism and authoritarianism, based on a bureaucratic structure, the unconditional priority for technical and technological creativity (Warner, 1997).

French organizations are usually very complex and have a reduced dimension of supervision. The number of managers is very high, hierarchical levels are bounded and French managers are considered to be the most well educated managers in Europe. There is a strict separation of different categories of personnel: managers,

civil servants, technicians and workers, respectively, are making a clear distinction between top managers and middle managers. The driving style for managers is generally authoritarian, paternalist, with a manifestation to avoid legal liability, not to whole country scale, but explicable because of their distance from power. It is remarkable, that France have the highest value of this indicator in Western Europe, this hierarchical differentiation being matched by a very strong specialization of tasks and qualifications (Warner, 1997).

A feature of the French economy is nationalization, as since the postwar period and until the mid-1990s many companies have undergone this process. As a general rule, the nationalization process causes a decrease in quality, which was experienced by many European countries, however, this has not happened also in France. The vast majority of French companies led by the State, were leaders in the field of quality in Europe, the company Renault is very representative in this context. Juran (1999) put this feature to the French economy on account of the excellent training of managers. Essential elements in the French approach in the design of quality Juran's are the following (Juran, 1999: 38.7):

- the central role of the State in promoting quality, as a result of his dominant presence in the economy. Talking about nationalization, it has in this sense the most extreme form, the interventions seem to have a beneficial role, because of the superior quality of management, as quality of managers in the administration of the state is superior to that of other European countries;
- the deliberate concentration regarding region and in particular on small and medium enterprises has stimulated the local activity and created the progressive bottom up movement;
- the particular characteristics of the French Award for quality, which was introduced in 1993, is aimed for small and medium-sized enterprises, on the basis of a selection bottom up procedure, from the regional level to the national level. Companies that sign up for the prize, must be qualified for the regional phase, and only then, if they meet the criteria arrived the national phase. It should be noted that there is a high level of participation in this award on behalf of French companies. This bottom-up approach has been taken as the reference model in drawing up the plan for the European quality award.

In the general context of the quality development, the national power is relevant and meaningful in France not only at central level, but also at the regional level. It is in fact a national culture of France, which has generated a very favourable situation for the quality development.

### **3.2.3. Quality in Germany**

German cultural characteristics determined on the basis of the values recorded by Hofstede's model are the following (Hofstede, 2010: 64, 99, 142, 188):

- a lower power distance, with an index of 35
- individualism quite pronounced, with an index of 67
- masculinity quite pronounced, with an index of 66
- relatively strong uncertainty avoidance, with a rate of 65

The German management principles are: results-based management, competence and interpersonal relations. Value discipline, industry and creativity of the individual,

participatory management based on co-determination, individual and social well-being (Warner, 1997).

With regard to the Organization, one can identify the following: organizational structures on the functions or divisions and the management budgets. High importance is given to engineering and resources saving, and low importance is given to marketing. Managers at the pyramid of the hierarchy, i.e., the head of the team or the foreman, have a very important role. Workshop managers are responsible for the vocational training of their workers, which means that it focuses on discipleship at work. Very high importance is given to quality and innovation. The managerial control is relatively rigid, namely, delegation of authority is rarely encountered. (Lawrence & Edwards, 2000).

With regard to the quality development Juran (1999) believes that "mastery" of the German industry is rooted in the quality standards established by the guilds of German manufacture. The German standards were based on an internship of 3-4 years, which is fundamental to develop certain skills for the workers. Routine tasks are performed by the unskilled labour force, while highly skilled experts play an important role in thinking and producing quality. While large and medium-sized companies maintain a strong work crafted approach, the small organisations are strongly influenced by the legacy of guilds (Juran, 1979). Another key element for the success of the German system, which has brought considerable benefits, is the standardization, the German Standards Committee being established in 1926. The state intervention coincides with the interests of the private sector, generating great competitive advantages for the economic system. High quality of German products is linked to the other distinctive feature of the system, namely the trade marks and service marks. Using the trademark to ensure product quality has its origin in the guilds. Superior quality has been and is linked to a higher price, making German products to be niche products, offering quality and dependability similar to those of art. Another specific feature of German quality approach, is the importance of the Foundation, Stiftung Warentest founded in 1961, which carries out systematic testing of various products of competitors from the market, publishing the results in a magazine, which are used in advertising. Quality has been the main point of interest for German industry, but currently the risk of competition from other industries have great success in combining quality with efficiency and large-scale production. German industry has realized the importance of quality management more slowly, primarily at the level of quality assurance and quality management level. (Juran, 1979).

One can see the relationship of dependency between the cultural dimensions of Germany and how to address quality: focusing on the aspects of deep engineering, integration and training of workers within the companies; all these cultural aspects determine the evolution of the quality niche in order to achieve a globally and premium quality standard.

### **3.3. Quality Approach in Eastern Europe**

Eastern Europe has a tumultuous history, the countries in this part of Europe, such as Poland, the Czech Republic, Slovakia, Bulgaria, Romania, Hungary, Ukraine, Estonia, Latvia, Lithuania declared themselves or were incorporated into the Soviet bloc of the USSR along with the central core of Russia, which was a decisive

influence factor in all the fields of interest of the region, so therefore also in the approach and development of quality. (Milbank, 1994)

The Communist model characteristics have deeply affected the quality approach, this model is influencing today this part of Europe. In order to provide an overview of the Communist economy, punctuated briefly in the following traits (Juran, 1999: 39.2):

- *the economy was centrally planned*, which means that all decisions are made at the Center with the pressure "of the plan" and to protect themselves from failure. Managers across the economy were addressing unclear schemes either to carry out or plan, in order to ensure that the fault could be attributed to the failure of someone else, which work to unrealistic plans;
- *in effect, the state was the only customer* regarding the consumer goods, this meant that the huge central agencies represented the needs of the whole population, and there was no any direct input on the part of the consumer as regards the design of goods and services, i.e. There is no real feedback from the consumer, which meant that the consumer had to accept what is offered, which means to accept the quality provided by the state.
- *orientation was toward production volume*, and not the quality, the centralized plan required commitments for numerical quotas, and in order to achieve the fulfillment of the plan, most of the times there have been developed rebates to the quality.
- *most of the industrial production was destined for military purposes* thus, an elevated priority military system implies a low priority accorded to the rest of the economy
- *the plan committed the state to heavy-industrial development*, the objective of this policy was the transformation of the economy to one of industrial type, so the entire region to remains with factories, which were unable to react to the rapid changes of the market and of technology
- *there was little or no private ownership of property.*

The forces that influenced the development of the quality in Eastern Europe after the fall of Communist regimes are according to Juran (1999: 39.5):

- *local appearance of Japanese and Western goods*: Western created at the beginning of their local markets, a standard of comparison with products made by the old regime;
- *availability for purchase of Japanese and Western goods in the local market place*: the quality standards were determined by the market and not by the meetings held in the offices of standardization organizations;
- *the need and desire to compete at home against Western imports*, situation that awares Governments of the region that the long term local industry must achieve competitive products;
- *need and desire to sell high-value goods on the international market*: Governments are conscious that the key element for the long-term economic health is the participation in the world market and global competition requires high quality products;
- *joint venture with international corporations*, they are proving to be effective vehicles for technology transfer in the market-oriented management, which includes quality management.

With respect to the quality approach in terms of cultural influence in a country in Eastern Europe, it will be referred to Romania:

With regard to the cultural characteristics of Romania, estimated on the basis of the model of Hofstede are the following (Hofstede, 2010: 64, 99,142,188):

- power distance is very high, with an index of 90, "management has a discretionary character corresponding to an effective mechanism of preservation and highlights the status differences, characterised in particular by arbitrary and unconditional obedience leadership from hierarchical superiors" (Lungescu, 2005)
- individualism, with an index of 30, "characterized by the expectation of support from the community, lack of initiative, counterproductive vision of private property and, above all, nepotism and the primacy of the interests of the group" (Lungescu, 2005)
- masculinity, with an index of 42, "with a slight tendency to womanhood. Unfortunately, from this point of view the Romanian culture is not homogeneous, but includes a set of extremely masculine tendencies, pronounced differentiation between the behaviors of the two sexes, counterbalanced by a pronounced feminine tendencies of egalitarianism, the rich people's vision and convenience, etc." (Lungescu, 2005)
- very high degree of uncertainty avoidance, with an index of 90, "characterized by contrary trends: on the one hand to avoid strong elements in the social impact of religions, the need for supervisory authorities for more citizens, etc., on the other hand elements of uncertainty, indifference, lack of pathologic laxity rigour, etc." (Lungescu, 2005).

With regard to the development of quality, 24 years after the communist regime change, a significant step in changing the culture of quality, is the establishment of the Foundation "For Quality Award 1999 – J. M. Juran". Since 2000 is held the first edition of the prize for quality – J. M. Juran. The Mission of the Foundation as we find on the web page is: "the Foundation For Quality Award – J. M. Juran is the most important factor for progress through quality Romanian organisations" (PRC-JMJ). The basis of the Award criteria was the European model of excellence. The creation prize is approved by the European Commission for quality (EOQ), the European Foundation for quality management (EFQM) and is based on the following fundamental concepts: customer-orientation; partnership "supplier-client"; development and involvement of personnel; continuous development and innovation; the leadership and consistency of objectives; responsibility; results orientation. To win the prize of quality Romanian – j. m. JURAN, candidates must furnish proof that they are on the path to excellence in business practice, over a number of years, and have met the expectations of stakeholders. These stakeholders are: customers; employees; service providers; shareholders; (the owners) and at the same time, the company in which the organization operates (Ilies, 2003).

#### **4. Conclusions**

It can be seen that there are close links between the cultural specificities of a country and the way they approach to quality. The characteristics of cultural dimensions Hofstede explains the evolution of the quality of the country concerned. For example, in the United Kingdom, the cultural characteristics as fairplay and fairness can

explain the need for a quality standardization approach and reluctance towards a new approach to quality and total quality management. In France, the official dirigisme both at central level and at the regional level, due on the one hand, to the high power distance has generated a very favorable situation for the quality development, unmatched in any other European country. In Germany, the deep concentration on engineering, integration and trainings for the workers, the deep professionalism are leading to the realization of a standard of premium quality, namely niche quality. In Eastern Europe, thanks to the four decades of the totalitarian regime, the evolution of the quality journey steps until reaching the total quality management philosophy approach.

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# ORGANIZATIONAL DEVELOPMENT IN THE FIELD OF POSTAL SERVICES

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**Abstract:** *In the current competitive context organizational development of enterprises determine radical changes in order to cope with an environment dominated by deep uncertainty and creates the ability to renew its own knowledge assets in order to gain competitive advantage in a market more and more complex and diverse. A detailed analysis has been made of the organizational development at the County Postal Office in Cluj according to Greiner's model in the five phases of development: creativity, leadership, delegation, coordination and collaboration, the five types of crisis being defined for each stage/phase, respectively: leadership crisis, autonomy crisis, control crisis, staff crisis and unknown crisis. By delegating responsibilities a special attention is required with regard to the way of acting, the availability of managers to give up power, the "reaction" of top managers, etc. With the new development phase, that is the phase of delegation, there are found some objectives with respect to use of delegation as a tool to facilitate organizational development, the creation of an organizational culture favorable to development, the improvement of the motivational system or the development of interpersonal relationships.*

*The evaluation of organizational development at the County Postal Office in Cluj was made by applying a questionnaire on organizational development that consists of 60 descriptive statements, answered by four of the organization's management and 56 employees with executive positions. Following the results obtained from the questionnaires there has been showed that the organization is in phase two of development that is leadership development. The applied management style starts to be on odds with reality and triggers the crisis of autonomy, which requires delegation of authority and responsibilities to as many employees as possible, involvement and encouragement of initiatives of the staff. After analyzing the questionnaire responses, it was revealed that the organization is in the second phase of development, respectively development through leadership, requiring an authorized leader to streamline the activity and to create major necessary budgeting systems of reward and communication.*

**Keywords:** organizational development, assessment, questionnaire

**JEL classification:** O43

## 1. Introduction

Organizational development promotes targeting goals by harmonizing them with the aims of people working in the organization, by changing the organizational culture and optimizing organizational communication on the basis of principles of openness, trust, information sharing, productivity, organization and work group dynamics, etc. For this reason "the development of organizations is a planned effort, depending on the size of the organization, managed from above, aimed to improve the health and

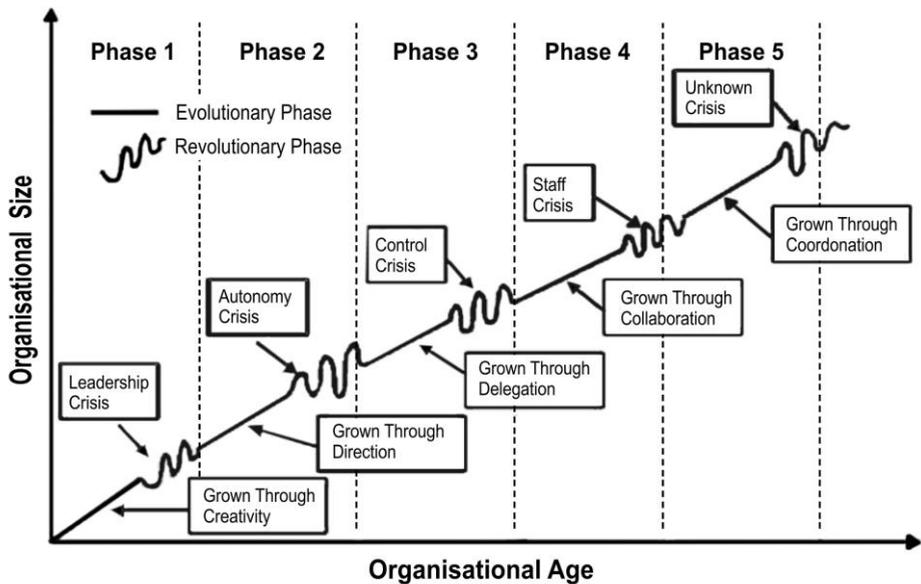
effectiveness of the organization through planned interventions on the organization's processes, using behavioral science knowledge in the field" (Burduş, Căprescu and Androniceanu, 2008). However, "organizational development is an intervention at the level of the human component of the organization, which aims to increase the overall organizational performance and employee efficiency" (Vlad, 2010:142).

For these goals, an important role is played by the manager and, in particular, the managerial ethical behavior, "which manifests itself not only in accordance with the law, but also with a broad set of moral principles common to all societies. Managers that act ethically have a huge positive impact on social outcomes of the activity undertaken by the organizations they lead" (Abrudan, Deaconu and Lukacs, coordinators, 2010). In addition to appropriate ethical behavior, managers must have different roles: interpersonal roles, informational roles and decisional roles (after Henry Mintzberg and Rosemary Stewart in *The Nature of Managerial Work*, 1980). The combination or "mix of roles for each manager depends on the level that the manager occupies within the organization, the nature of the tasks and the stage in his career" (Pintea, 2011:120). Hence the management philosophy aimed at people that "does not only mean that people are representing the organization, but also the respect for people to compete with other people" (Purdea and Macra-Oşorhean, 2010: 255)

For each company to operate at the optimum parameters, we need effective communication and managerial communication that „is increasingly important at the interpersonal level for positive interaction among all levels of management. It is essential for managers to interact with internal employees and external stakeholders to accomplish managerial objectives and develop positive team relationship” (Pipaş and Jaradat, 2012: 82). Another important aspect is planning/forecasting of staff, besides an adequate and appropriate selection recruitment of potential employees, along with a process of on-boarding and training that "represents a necessity from the desire of the individual to plan his career, but also from the needs of the organization" (Gârbo, 2008:113).

## **2. The Greiner model and organizational development**

According to Greiner, all organizations follow the same predictable development stages: developing through creativity, development through leadership, development under delegation, development through coordination, collaborative development. Thus, it highlights some of the characteristics and problems of each stage of development and some of the matters that may be included in the transformation of an organization (Fig. 1).



**Figure 1:** The organizational development by Greiner  
 (Source: Clarke L., 2002, pg. 20 apud. E. L. Greiner, *Evolution and revolution as organization grow*, 1980)

"The Greiner model has proven true for many companies and has a logical organizational development" (Câmpeanu Sonea and Sonea, 2006). As the company matures and its size increases, it passes through the five stages of development representing cycles of evolution and revolution. Greiner proposes an analysis of the changes that the structure has to suffer, the strategy and behavior of an organization if it relates to transition to the next stage of development. His study shows that most businesses do not learn to adapt, at least not in time. In the best case, they seem trapped in a "time loop", being unable to exceed a certain size. The Greiner model highlights the characteristics of each stage of development and proposes a scheme useful for successfully passing a crisis.

The Greiner model is particularly useful for any management team facing change through the following:

- provides a common language, common terminology needed for discussion about change and sharing experiences related to the process of transformation;
- John Leppard questionnaire can be used to determine where the firm stands in the growth curve, allowing "finding" of problems that can be anticipated in the future;
- it demonstrates the need for change at different stages of development of the business (because what worked in the past will no longer be applicable in the future).

### **3. Predictable crises of development of postal services (on the example of County Postal Office in Cluj)**

Currently, mail services go through significant changes that bring with them challenges for organizations, members and partners. Globalization, market liberalization, increased competition and development of information and communication technology is changing the way postal administrations do business. The decreased of volume of referrals, the emergence of electronic alternatives and changing in the consumer needs, require innovative measures, which will lead to the creation of new services, in order to maintain postal administrations competitive and generating revenue.

Following Greiner's model there was made a detailed analysis of the County Post Office in Cluj (it used to be the Regional Directorate of Postal Cluj) on the five stages of development (Table 1): Creativity, Leadership, Delegation, Coordination and Collaboration, being defined the five of crisis types for each stage / phase, respectively:

Stage 1: Leadership crisis

Stage 2: Autonomy crisis

Stage 3: Control crisis

Stage 4: Staff crisis

Stage 5: Unknown crisis

For each stage there were analyzed aspects referring to structures, systems, styles/people and advantages, at the weaknesses being presented items refereeing to above mentioned crises. Each stage of development has its specifics, with some advantages and some drawbacks, which actually would trigger those moments of crisis that would bring further improvements in the development of postal services.

Creativity - is characterizes by an informal structure with an immediate response to customer reaction and styles such individualistic, creative and initiative, and the benefits are attractiveness and responsiveness, triggering the crisis of management. For this reason there was developed the second stage - Leadership - which has a top-down structure and directive leadership, standards-based, cost centers, budget and wage with advantages of efficiency and effectiveness, favoring the triggering of the autonomy crisis.

The third stage is characterized by delegation, with a form of structure that is the opposite of the creativity structure, respectively bottom-up, with applied central systems on tax and management by exception. Full delegation is applied and autonomy with strong motivation from management, which subsequently triggered the crisis of control. The fourth stage, called coordination was characterized by strategic business units operating under product groups based on methods of planning and investment centers with severe spending controls and close supervision of the activities. Thus, the crisis of bureaucracy was triggered which determined the apparition of phase 5 - collaboration, based on a matrix structure with streamlined and integrated information systems with a focus on economics, expertise and innovation that created advantages with high spontaneity, flexible and behavioral approach. All these advantages can lead to a psychological saturation, that will trigger another crisis for new openings and opportunities.

**Table 1:** Predictable crises of development of postal services

Specificati on	Phase 1 Creativity	Phase 2 Leadersh ip	Phase 3 Delegatio n	Phase 4 Coordinati on	Phase 5 Collaborati on
Structure	Casual	Functional Central Hierarchica l From top to bottom	Decentraliz ed From bottom to top	Staff functions Strategic business units Units operating according to product groups	Matrix structure
Systems	Immediate response to customer reaction	Standards Cost centers Budget Wage systems	Profit centers Pay bonus Managemen t by exceptions	Formal planning methods Investment centers Severe controls of spending	Streamlined and integrated information systems
Styles / People	Individualistic Creative Leadership spirit	Impairment leadership (ordering)	Full delegation and autonomy	Supervision	Focus on economy Importance given to relational skills Innovation
Advantage s	Attractivenes s Responsiven ess to market demands	Efficiency	Strong motivation of the managemen t	More efficient allocation of corporate and local resources	High degree of spontaneity Flexible and behavioral approach
<b>Crisis point</b>	<b>Leadership crisis</b>	<b>Autonom y crisis</b>	<b>Control crisis</b>	<b>Staff crisis</b>	<b>Unknown crisis</b>
Weaknesse s	The founder has often a temperament inadequate to management activity	Inadequate to diversificati on Hierarchica l Do not form their people	Senior managers lose control as freedom cultivate liberal attitudes	Bureaucratic divisions between hierarchical / functional structures, headquarter s, field	Psychologica l saturation

#### 4. Evaluation of organizational development at the County Postal Office in Cluj

To outline directions for organizational development is useful to evaluate on what level of development is the County Postal Office in Cluj. For this purpose we used a questionnaire on organizational development that consists of 60 descriptive statements (Appendix 1). The questionnaire was completed by 4 decision makers and 56 employees. From the list

there were chosen the allegations that the firm is deemed fit. Whenever a statement that fits the company is encountered it is ticked. Once all 60 statements were completed, we transfer the check marks on the score sheet (Table 2) and are ticked in the box with the same number. At the end of the questionnaire the check marks are added up. Depending on the column that score approaches, the diagnosis of stage development of the company can be established. Through this list are selected the statements which are deemed fit to the postal organization.

**Table 2:** Questionnaire scoring sheet on the organizational development

Phase 1	1. Crisis	Phase 2	2. Crisis	Phase 3	3. Crisis	Phase 4	4. Crisis	Phase 5	5. Crisis
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60

Where:

Phase 1 Development through creativity: 1 Leadership crisis

Phase 2 Development through leadership: 2 Autonomy crisis

Phase 3 Development through delegation: 3 Control crisis

Phase 4 Development through coordination: 4 Staff crisis

Phase 5 Development through collaboration: 5 Unknown Crisis

From the data analysis there is shown that the organization is in phase 2 of development through leadership. At this stage there is the need of an authorized leader to guide the activities and establish the main budgeting system of reward and communication necessary for the firm to be effective.

The directive management style "from top to bottom" begins to be inconsistent with professional managers that lead activities in which they are specialized. Generally these managers are involved in conflicts of interest in order to be heard or will lose motivation and leave. Thus, autonomy crisis is triggered. The solution to solve the autonomy crisis is to admit that the authority must be delegated to a greater number of company's employees.

The next stage of development of the County Postal Office in Cluj is development through delegation. The organization needs a team and it must assign authority to more people. Devolution of decision in order to create a strong sense of employee involvement, inevitably involves control issues, senior managers are panic-stricken and attempt to seize power. Everywhere managers encourage their employees to

take initiative. In fact, once we begin to understand what delegating responsibility really means, it becomes obvious that there are many issues that require attention, such as:

- What is the "action space"?
- To what extent managers are willing to give up power?
- When the context is unfavorable, senior managers panic and take back the power?

In the stages of development through delegation, the structure is decentralized, centers of profit are created, salary and bonus system is rethought, management by exception develops and the leadership team is highly motivated. Knowing the new development stage that the organization must follow, we can establish several strategic development objectives:

- the use delegation as a tool for facilitating organizational development;
- creating an organizational culture conducive to development;
- improving the motivation system;
- development of interpersonal relationships.

## **5. Conclusions**

Organizational development is necessary to change attitudes of managers and employees within organizations, covering the entire organization and aims to improve organizations' capacity to solve problems, to improve organizational climate through direct involvement of people in order to increase flexibility, capacity of adaptation to environmental changes and more effective use of resources. Organizational development uses methods and knowledge of behavioral sciences in order to improve human performance, focusing on the full exploitation of human potential in the field of organizational change.

Using the evaluation questionnaire and adopting Greiner's model on predictable stages of development of the organization, it was established that the County Postal Office in Cluj is at the level of development through leadership, after which the autonomy crisis will follow and the next level of development will be development through delegation. For this reason we can define several strategic development objectives with respect to:

- use of delegation;
- development of management by exception;
- creating an organizational culture favorable to development;
- development of interpersonal relationships;
- improving the motivational system.

Also there can be used successfully some of the methods of organizational development, including: formation of team spirit, surveys feedback, total quality management and reengineering. By the training of team spirit is sought the increase of work efficiency by focusing on interpersonal processes, clarifying objectives and wages. Feedback of survey requires organization members to suggest data that are then administered as a basis for change. Total quality management aims to achieve a continuous improvement in the quality of products or services. Reengineering means a radical redesign of organizational processes to achieve major improvements in time, cost, quality of products or customer service.

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## Appendix 1

### Evaluation questionnaire on organizational development

1. The organizational structure is informal.
2. Senior management is burdened by numerous unwanted management responsibilities.
3. Management focuses mainly on activity efficiency.
4. Staff at lower levels of the organization knows the markets, products, trends and so on better than senior management.
5. The main concern of management is to expand markets.
6. Senior managers feel they are losing control of the company.
7. Management focuses primarily on coordination and consolidation.
8. The trust is missing between staff in administrative roles and specialist staff, between headquarters and subsidiaries.
9. Management focuses mainly on problem solving and innovation.
10. Teamwork has a huge importance.
11. Top management adopts an individualistic and personal initiative oriented style.
12. Top management needs too much time to answer questions and requests.
13. The organizational structure is centralized and functional, based on specialization.
14. There is not given sufficient scope to those able to do so.
15. The organizational structure is decentralized and affiliates and different departments enjoy a high degree of autonomy.
16. Many employees at lower levels have too much freedom to act on their own.
17. Decentralized units were grouped into categories of products.

18. Managers at middle and lower levels think that the senior management authority is exaggerated.
19. The organization is a matrix of tasks or project teams.
20. Dependence on the decisions in groups is so large that some managers lose confidence on individual decisions.
21. The main control system is to determine whether or not the sales goals were met.
22. Senior management does not provide sufficient guidance.
23. Senior management tends authoritatively exert their duties and could easily delegate authority.
24. Senior management resorts to delegation of authority.
25. It may be possible that the organization is too decentralized, cultivating liberal attitudes.
26. Senior management resorts to delegation of authority.
27. Top management prefers to supervise rather than to direct.
28. It seems that we have lost the ability to react to new situations or to solve problems quickly.
29. Senior management adopts an advisory style, often organizing meetings to debate issues.
30. We spend too much energy on internal teams and we tend to neglect what is happening in the external environment.
31. Long hours of work are rewarded by modest salaries, but there is the promise of future benefits.
32. Senior management is not involved as it should.
33. The main control systems aim standards and costs.
34. Flexibility is impaired as a result that those who could make decisions must await management approval.
35. Control is exercised mainly through profit centers.
36. Senior management seems to not have the authority.
37. Each product category is an investment center subject to detailed scrutiny.
38. Everyone criticizes the bureaucratic system created.
39. The main control system is in the evaluation of the work teams of their own performance with help of real-time information systems, integrated in daily work.
40. There is already a very strong individual feedback on behavior in meetings.
41. Management focuses mainly on production and sale.
42. Senior management is very tense, conflicts between its members being intense.
43. The main way to reward managers is the salary, plus bonuses.
44. Employees lost their motivation, even quit, because of the lack of sufficient personal autonomy in the functions they perform.
45. The way managers are compensated is the individual premiums.
46. We need a better coordination of activities.
47. The way managers are compensated is the share of profit and granting shares.
48. Good humor and enthusiasm seem to be missing from the company.
49. Especially team performance is rewarded and in a lesser extent the individual success.

50. Permanent creative requirements create tension.
51. Senior management maintains close relationships with clients and is informed regarding to market requirements.
52. Senior management does not seem to be able to introduce new business techniques required.
53. To be appreciated in the company, managers at lower management levels do not question the decisions of their superiors.
54. The performances are evaluated by managers who have little knowledge about their subordinate's work and working problems.
55. The personnel is communicated what is expected of them and then allowed to perform their work as they see fit. It is management by exception.
56. Experienced managers make regular checks to ensure that the work was done - they tend to exaggerate in this regard.
57. Many employees at headquarters develop work programs to verify the work of local managers.
58. Too many employees work "by norms".
59. Conflicts between employees are manifested openly and are usually solved in a constructive way.
60. The constant struggle to be spontaneous and open in business relationships proves to be tiring.

# HOW TO DEAL WITH CORPORATE SOCIAL RESPONSIBILITY RELATED TO EMPLOYEES

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**Abstract:** *The aim of the paper is to examine an area which was not thoroughly researched until present. We refer on how Corporate Social Responsibility (CSR) practices are nowadays reflecting its actions to employees / labor force. This paper represents a theoretical research related to the latest developments in this field. We had documented our paper based on actual references on this matter. In order to make correct assessments, this material seeks firstly to examine the level of understanding in respect of internal CSR actions related to employees. It is very important to understand and to briefly describe how previous studies described the link between CSR actions assigned to own employees. Secondly, this paper focuses on presenting and commenting an idea prescribing that pyramids (i.e. the pyramid of Maslow's hierarchy of human needs and the pyramid of Carroll's corporate social responsibility) put together generate a clear feedback related to companies' reactions in respect of CSR for their employees. In a practical manner, it is assumed that each level on the pyramid of Maslow has a correspondent in the pyramid of Carroll and vice-versa. This model is then precisely reflected when looking at the employees and their needs reflected through CSR actions. Thirdly, this paper also emphasizes the importance of the labor unions for employees' CSR. We discuss about an out-of-the-box role for the labor unions, which should be engaged more and more in the employees updated wishes, one of them being about various CSR actions that need to be focused on employees. We assume that CSR efforts directed in the field of employees would make them more responsible, more eager to work and more productive in their day-to-day work.*

**Keywords:** *Corporate Social Responsibility; Employees; Labor Unions; Pyramids*

**JEL classification:** *M14*

## **1. Introduction**

Financial crisis had spread around the world and many systems had to suffer. Thus, one of the consequences of the financial crisis was that occurred delays in paying wages and unreasonable disorders. Wages represent nowadays a method to maintain basic survival needs for employees and their families (Wei, 2013). In this respect, we consider that it should be more careful understood the way in which companies are capable to create an internal CSR practice behavior related to their employees. We may argue that until now this internal CSR component was not so much researched.

However, recent studies argue that a thoughtful relation should exist between the pyramid of Maslow's hierarchy of needs and the pyramid of Carroll's CSR. This relation is called as "double pyramid" thought and was considered to help creating a

better society derived from a good management of corporations' social responsibility for their employees. (Brammer, S., Williams, J., 2007 and Wei, 2013).

Another factor that may influence companies' attitude related to CSR for employees is the active presence of the labor unions in the market. In the past, it was believed that unions only responsibility was to mediate better working conditions of their members. In present times, we consider that it is important to observe the actual versus desired involvement of unionized labor to the so-called their social responsibility.

## **2. Internal CSR actions related to employees**

Internal CSR actions related to employees are not very researched and the level of understanding and its importance are not at an optimum level. We consider that it is important for each company to manage its business in order to show interest to its employees' wishes. It is true that nowadays crisis made a lot of companies to think twice before spending money.

However, it is well known that each company bears profit and loss and that profit is the motive power of business management. In many situations, companies are not interested in social responsibility for their employees. It is clear that generally speaking CSR actions are seen as external activities, even though specialists consider that own employees are part of the CSR stakeholders.

When we discuss about small and medium-sized enterprises and even about multinational corporations, there are generally two ways (Wei, 2013) to approach profit maximization:

- to save internal management cost, by speeding up the assembly line, lowering the piece-rate wage, increase daily workload and
- to reduce social spending as much as possible. Most of private companies only pay attention to corporate interests, neglect employee's benefits (i.e. endowment insurance, medical insurance, injury insurance, etc.) and do not carry out on the labor rights (i.e. extension of the working hours, etc.)

This attitude may not be helpful for companies because of the feedback received from employees and from the other stakeholders. We may only take the example of a company who intends to contract a loan from banks – this company may incur problems (i.e. refuse or higher interest rates) because of its internal issues (i.e. even CSR policy) with employees.

A correct approach would be that businesses to be managed by professional managers who understand that profits are not only belonging to owners, but also to all investors. Companies' interests and social interests are imparted and have influences on each other. Every company needs to have a common understanding related to a better treatment for employees, which may be seen by all the stakeholders as a positive CSR activity.

## **3. “Double Pyramid” thought**

As Wei (2013) have mentioned in his paper, each enterprise should not only realize the profit maximization, but also to meet the individual needs of employees. All enterprises should not only undertake financial responsibility, but also undertake social responsibility. In a word, those enterprises that their employees' personal needs and social welfare are all brought into the enterprises' agenda, can have the favorable development, and will grow much bigger and stronger (Wei, 2013). Thus,

as a strong argument, the design of Maslow and Carroll pyramids was to offer an idea on how to positively cope to the success of employees' CSR.

### 3.1. The Pyramid of Maslow's Hierarchy of Human Needs

Maslow's hierarchy of needs was mentioned for the first time in the field of psychology and was created by Abraham Maslow, in his paper "A Theory of Human Motivation (Maslow, 1943: pg370)." After initial issue of the paper, Abraham Maslow extended the idea to include his observations of humans' innate curiosity. His theories parallel many other theories of human developmental psychology, all of which focus on describing the stages of growth in humans. He had used the terms such as physiological needs, safety needs, love and belongings, esteem, and self-actualization needs, as his objectives were to describe the pattern that human motivations generally move through (Wei, 2013). The physiological needs are the largest and most fundamental level of needs at the pyramid bottom of Maslow's hierarchy needs. The self-actualization needs are at the pyramid top of Maslow's hierarchy needs (Maslow, 1943).



**Figure 1:** The pyramid of Maslow's hierarchy of human needs  
Source: (Maslow, 1943)

As a short notice on the content of the pyramid, *Physiological needs* are obvious - they are required for human life, as the human body simply cannot continue to function well. *Physical needs* are active when individual's safety needs take precedence and dominate behavior. *Safety* needs include personal security, financial security, health and well-being, safety net against accidents and their adverse impacts. After physiological and safety needs are fulfilled, the third level of human needs which is interpersonal and involves feelings is *belonging*.

All human have a need to be respected, and they have *self-esteem and self-respect*. *Esteem* presents the normal human desire to be accepted and valued by others. *Self-actualization* is the level of need pertains to what a person's full potential is and realizing that potential. Maslow describes this desire as the desire to become more and more what one is, to become everything that one is capable of becoming. This is a broad definition of the need for self-actualization, but when applied to individuals the need is specific.

### 3.2. The Pyramid of Carroll's Corporate Social Responsibility

Carroll studied the responsibilities of enterprises and finally managed to create a pyramid of corporate society responsibility (Carroll, 1991).



**Figure 2:** The pyramid of Carroll's corporate  
Source: (Carroll, 1991)

Carroll considers that *economic responsibilities* are the base of the CSR pyramid, the beginning of a fair and just social responsibility while *legal responsibilities* are the next layer of the CSR pyramid and it merges with the economic responsibilities. The third layer of the CSR pyramid is *ethical responsibilities* in respect of standards, expectations and norms that are seen as fair by all entities involved, such as the community, consumers, shareholders and employees. These are the agreed-upon moral obligations of the business. The top of the CSR pyramid is *philanthropic responsibilities*, which reflect the expectations of corporate citizens, encouraging the promotion of concern and well-being of the community.

### 3.3. "Double Pyramid" concept – instrument for managing CSR related to employees

"Double Pyramid" concept derives from the pyramids described above. The essence of the concept relates to the fact that employees' needs should follow Maslow's hierarchy of needs while corporate management should follow Carroll's CSR pyramid.

There are important arguments that present the pyramids relations. First argument is that contractual obligations are relationships of labor and capital. The basic economic responsibility and legal liability are ethical bottom lines for getting labor resources (Cianci, R., Gambrel, P.A., 2003).

Another argument would be that companies not only pursuit profit maximization, but also meet their employees' physical and security needs. Labor is one of the key elements of business development. Only with safe working environment companies may retain and expand its business (Tang, T. L. P., Ibrahim, A. H. S., & West, W. B., 2002).

Business owners should respect and meet employees' social needs and right (e.g. holidays, vacation, birth and maternity leave, etc.) and grant employees' the right of insurance, welfare, education and training.

These can make them wholeheartedly work for the enterprises without any trouble back at home. All those can also arouse employees' work enthusiasm. They will contribute their ideas and efforts to firms' future development.

By taking into consideration Maslow's hierarchy of needs and Carroll's CSR, the essence of the "two pyramids" concept is that business owners and their employees should be harmoniously coexistent, mutually beneficial to each other while developing. In a market economy, every company with its specific operations needs labor production elements for its uninterrupted development. On the other side, employees are in position to be remunerated for work rendered by the employer. Even though in a financial crisis period the employees may find difficult to find easier new jobs, it is known that companies should still meet basic survival requirement and improve employees' rights for the long-term development. Only in the harmonious environment the employees would offer maximum potential of their capabilities. In modern society, different people do different things because of division of labor. People devote themselves to all kinds of affairs, and they undertake different responsibilities. Although employees work for enterprises in order to gain wages, enterprises should also offer safe working environment to ensure their lives (Wei, 2013).

Each business enterprise should provide equal promotion and education opportunities for his employees. Every employee should not be discriminated due to gender, age, race, color or faith. The enterprise should also create favorable working conditions for employees, and improve their scientific and cultural levels at the same time, which will promote the employees' development and perfection. In addition, the enterprise should respect employees' needs and pay attention to employees' opinions and demands. Therefore, the "double pyramid" concept may be accomplished through employees' self-worth and companies that achieve the enterprise's economic benefits at a maximum level.

#### **4. Labor Unions – supporting institutions for CSR related to employees**

Starting from the history, labor unions had the objective of securing the best possible working conditions for their members. However, unions may be defining working conditions too narrowly. Since union members usually live in the community in which they work, concern for the welfare of the workers should not stop at the end of the work shift. Local unions need to be involved in their local communities to insure that the non-working environment provides the best living conditions possible for their members. Such unions may give a helping hand to the employees by promoting their interests in order to be better served through CSR actions organized by their employers.

The national or international unions, of which the local is an affiliate, should also be involved in the broader state and national communities to insure that the cultural, physical, educational, and political environments do not negatively impact the members' living conditions. Since unions are not part of a political party they are in a position to lobby both sides of the aisle for meaningful legislation for the welfare of their members and hence, the common good (Carroll, 2010). Labor is more sensitive

to social responsibility issues as corporations expand their scope of stakeholders to the social sector (Marchand, R. (1997).

Social responsibility is a dynamic concept. What is considered socially responsible depends on the expectations of society and this evolves over time in response to changing circumstances. In respect of the labor unions in both the private sector and the public sector, it is probably advisable that unions may also have their social responsibilities and may help to promote the employees' wishes. Some of the union areas of responsibility are in contributing to full-employment, preparing members for other work, contributing to the quality of education in the community, supporting issues that involve improving life in the local and national communities, and supporting members in meeting the new social contract. (Carroll, 2008).

To be effective, the union has to represent a significant percentage of the labor force because this makes it possible for the union to have a strong bargaining position and may have better impact on companies. Unions, whether strong or weak, could emphasize the competitive advantage of undertaking social responsibility initiatives, encouraging their employers to see these as an element in their corporate competitive strategy. Unions could partner with other social groups, national unions could partner with international unions and Non-Government Organizations to work for better global labor practices. The local unions could work with local and state school boards to raise the general educational and skill level of the population (Carroll, 2010).

Labor union may represent an institution that can serve as a promoter for CSR related to employees.

## 5. Conclusions

It is important for each company to manage its business in a way in which to be able to also show interest to its employees' wishes. Even though the financial crisis made a lot of companies to think twice before spending money, the approach and interest of companies should increase when referring to internal CSR actions related to their employees.

When an interest for CSR actions related to employees was generated, we observed that we have in front of us a double win situation, according to the idea prescribing that pyramids (i.e. the pyramid of Maslow's hierarchy of human needs and the pyramid of Carroll's corporate social responsibility) put together generate mutual and positive feedback related to companies' and employees reactions in respect of CSR. We may also conclude that companies' attitude related to CSR for employees may be "affected" by the active presence of the labor unions in the market. Such labor unions may trigger better mediation that may improve the impact on employees' social responsibility.

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# HUMAN RESOURCE MANAGEMENT - FROM FUNCTION TO STRATEGIC PARTNER

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**Abstract:** *In most of the organizations, people are now recognized as the vital asset. Their knowledge, skills and abilities must be deployed to the maximum effect if the organization is to become successful. The intangible value of an organization relating to the people it employs and its human resource strategies is gaining recognition and it is generally accepted that this has implications for long-term sustained performance.*

*The recent changes in the economy and the development of new technologies are creating the proper set for a series of other changes regarding the human resource management.*

*The first one refers to the need to respond to the challenges raised by the knowledge workers and the second one refers to the increasing role of human resource management in the strategic moves of the organizations.*

*Lately, because of the recent mentioned developments, strategic human resource management became a subject of ongoing discussion for academics. Its definition and relationships with other aspects of business planning and strategy vary, but the common agreement is that strategic human resource management is a complex process that is constantly evolving and that there is a need of understanding its usefulness. Having quality professional practices is a must, but this shouldn't be the only focus of the best human resource practitioners. They need to be able to combine their attention to basic administration with also making important strategic inputs that have a positive impact on the organization.*

*The purpose of this article is to present the current research state in the field of strategic human resource management. In order to achieve this, the factors that underline the importance of human resource management are assessed. The study has been accomplished using the methodology of bibliographic study and qualitative research.*

**Key words:** *human resource management, knowledge society, chief executive officers, partnership*

**JEL classification:** *M12*

## **1. Introduction**

Nowadays, the Human Resource (HR) function in the corporate world is going through two main changes. The first one relates to the rapid growth of the knowledge economy and the second one with the struggle of being more than just a function and becoming a strategic partner.

These two trends are reshaping the role of HR in the corporate world.

The first changes are generated by the new context of the knowledge society when a committed, appropriately skilled and prudently deployed workforce is critical in order to develop a competitive advantage.

The second change comes as an opportunity since many administrative functions that were formerly handled by HR departments, such as payroll and pensions, have now been outsourced, and specialists, unburdened by some of their former responsibilities, have a chance to transform their role, exploiting their image as experts in people to place themselves at the heart of the debate on a organization's strategic direction.

## **2. Human Resource Management in the knowledge society**

Changing knowledge management practices and global convergence of technology has redefined the nature of work (Horwitz F., 2003). This statement is true when we think about the actual work of any employee and also when referring to the work done by human resource specialists. Knowledge as the main resource of the century poses a large series of changes, from the way the economy and its' forces work, to the need of developing new management systems, to the way in which a worker thinks. The new era could be far more productive than the previous one, but in the same time can lead to certain confusion in respect with the changes that need to take place in order to get to the necessary performance level that guarantees survival and success.

Peter Drucker considers the knowledge-based company as the organizational model of the XXIst century and draws its main characteristics: *composition dominated by professionals, small number of intermediate levels of hierarchical leadership and coordination ensured by means of non-authoritative style (standards, procedures, rules of cooperation and so on)*.

This new type of organization forces specialists to change the traditional personnel management by creating different strategies for the most important resources.

Also, the 2008 global recession and demands for sustainable performance have forced corporate leaders to examine and re-evaluate how they manage and operate. They are utilizing new technologies, changing their organizations' structures, redesigning work, relocating workforces and improving work processes. These changes have significant implications for how their human capital should be managed and how their HR functions should operate (Lawler E., Boudreau J. W., 2012). Now, more than ever, the effectiveness of an organization depends on its ability to address talent management issues such as knowledge management and change management.

Due to the immense importance of knowledge workers as the main resource of the modern society, the organizations must not only be designed to accept the knowledge worker but, more radically, be designed with the worker as the consideration around which the rest of the organization must fit (Paton S., 2013). Also, the processes of the organization must focus on communication and coordination rather than command and control because direct supervision of knowledge workers is difficult, so implementing an organizational design that relies upon a vertical hierarchy is impractical.

The acknowledgement of the importance of a proper human resource management for knowledge workers is imperative for any organization that aspires progress. A successful management in this sense is a big challenge for organizations, and

human resource experts need to channel their abilities in order to attract, motivate and retain the most important resources of the century.

### **3. Strategic Human Resource Management (SHRM)**

The importance of the human resource department in an organization has been noticed ever since the early 1990s, at which time specialists developed a series of definition for strategic human resource management. SHRM was defined as “*the undertaking of all those activities affecting the behaviour of individuals in their efforts to formulate and implement the strategic needs of business*” (Schuler, R.S., 1992) and as “*the pattern of planned human resource deployments and activities intended to enable the organization to achieve its goals*” (Wright, P.M. and McMaha, G.C.,1992).

More recent, the Chartered Institute of Personnel and Development (CIPD) defines SHRM as *an approach to the management of human resources that provides a strategic framework to support long-term business goals and outcomes*. The approach is concerned with longer-term people issues and macro-concerns about structure, quality, culture, values, commitment and matching resources to future need (Armstrong M., Baron A., 2002).

Lately, because of the recent mentioned developments, strategic human resource management became a subject of ongoing discussion for academics. Its definition and relationships with other aspects of business planning and strategy vary, but the common agreement is that SHRM is a complex process that is constantly evolving and that there is a need of understanding its usefulness.

HR department always had strategies like *to deliver fair and equitable rewards, to improve employee performance* or *to streamline organizational structure*, but these strategies are not testimonies of SHRM. Rather, SHRM is the overall framework that determines the shape and delivery of the individual strategies (Armstrong M., Baron A., 2002). A clear view over the difference between human resource strategy and SHRM is offered by Boxall and Purcell which assert that strategic HRM is concerned with explaining how HRM influences organizational performance. They also argue that strategy is not the same as strategic planning because: *strategic planning* is the formal process that takes place, usually in larger organizations, defining how things will be done, and, by contrast, *strategy* exists in all organizations - even though it may not be written down and articulated - and defines the organization’s behavior and how it attempts to cope with its environment.

John Sullivan points out that human resources professionals often think they are being strategic when they are actually being tactical. He states that being strategic means having a business impact on the organization's corporate goals and objectives and that a certain program is strategic only if it meets the following criteria:

- It has a broad impact.
- It focuses on future needs.
- It has the potential to provide a sustainable competitive advantage.
- It has the potential to generate at least 1 percent of revenue or profits.
- It has a direct impact on long-term corporate goals.

The academics from at the Aston Centre for Human Resources in association with CIPD recently concluded that SHRM is about the integration of human resource management strategies into the corporate strategies and more specifically it means linking people with the organization.

In the new context, human resource management is not a concern just for the human resource department, rather it should be a main focus for the top management. The HR people are accountable to management for excellent human resource management processes, tools and coaching that work. They are responsible to energetically influence managers to effectively use the tools that have been designed.

HR Folks International has depicted a contrast between human resource management and the human resource department that explicitly shows areas of responsibility for managers and human resource professionals (figure no.1).

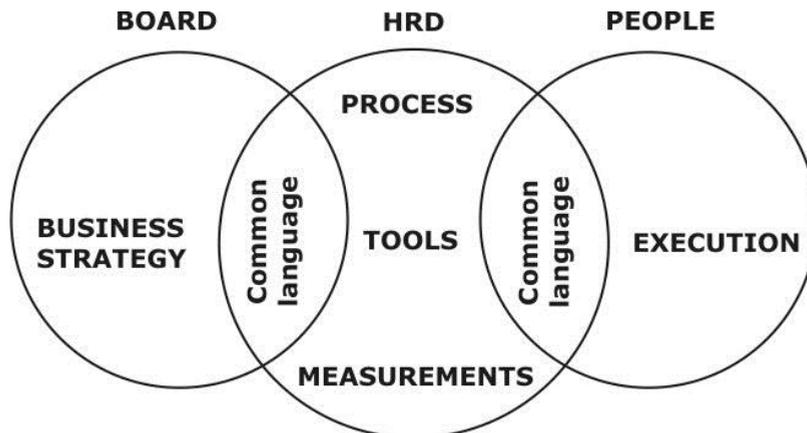
A good business strategy, one that is likely to succeed, is informed by people factors. This is one of the main reasons why human resource management should be strategic. So, if human resource management is a coherent approach to the management of people, SHRM implies that this is done in a planned way that integrates organizational goals with policies and action sequences (Armstrong M., Baron A., 2002).

**Table 1:** The contrast between human resource management and the human resource department

	<b>Human Resource Management</b>	<b>Human Resource Department</b>
<b>Focus</b>	Implementation of HR tools and practices	Development of HR tools and practices
<b>Owner</b>	Top management	HR department
<b>Outcome</b>	Creation of value through effective management of competencies	Effective HRM practice

Source: HR Folks International

It would be very simplistic to suggest that strategic human resource management just derives from the organization's business strategy. The relationship between the two should be mutually informative (Armstrong M., Baron A., 2002). Business strategy is also shaped by the way in which people are managed, motivated and deployed, and by their availability of sharing their skills and knowledge. In the new context, it should be impossible to find an organization that does not take into account the human resources, since they are the main asset. Individual human resource strategies are also shaped by the business strategy. For example, if the business strategy is about improving customer service this may be translated into discrete human resource strategies involving the use of training plans or performance improvement plans. In this case, the purpose of the human resource department is one of active partner for the board because only by being part of the design of the strategy, it will be later able to create the perfect tools and to translate the strategy in objectives that can be easily understood and completed by the employees (figure no.2).



**Figure 1:** The complex role of the Human Resource Department  
**Source:** own

Human resource strategy must be anchored to the business strategy and for this, HR professionals must understand the strategy and economic realities of the business it supports. HR people must “speak” the language of business and their activities must reflect the priorities of the business.

#### **4. The HR manager –a new seat at the executive table**

A global survey conducted in May 2012 on 235 executives by the Economist Intelligence Unit, Oracle and IBM, confirmed that chief executives are very concerned about the potential negative impact of certain human resource issues in the near future. A significant proportion of CEOs polled believe in the ability of their head of human resources to help the company to overcome these challenges.

Although the human resource function is believed to perform well within its own parameters, some doubts remain about its commercial understanding of the wider business. This indicates that heads of HR have not completed their transition from administrator to strategic partner although there is clearly a need for human resource professionals to assist in the vital people dimension of corporate strategy.

However, a significantly proportion (70%) of CEOs want the head of HR to be a key player in future corporate strategy, but things have to change since many respondents believe that their heads of HR are overly preoccupied with a narrow HR agenda and 37% say that human resource people don’t “understand the business well enough”.

These findings suggest that top executive expect their HR managers to demonstrate business pragmatism and efficiency. Therefore, it is important for the HR department to deploy both HR specialists as well as managers who possess a business background.

HR professionals could become drivers of organizational effectiveness and business strategy, the key question is whether they will rise to the occasion.

HR professionals can add value by (Lawler E.,Boudreau J. W., 2012):

- Providing administrative support services.
- Serving as business partners who help to implement business systems and practices.

- Becoming strategic partners who help corporate leaders develop business strategy.
- Measuring their performance against qualitative, quantitative and financial metrics

The last aspect is of extreme importance, especially when thinking about the need to attract bigger budgets for the human resource management. If HR professionals measure whether their programs are having a strategic impact and produce the desired results, they have more leverage when negotiating. The measurement can be either a detailed HR audit or a snapshot assessment that can be completed in a few days based on readily accessible data, such as financial performance measures, retention measures and recruiting measures (Sullivan J., ). Two of the most well-known methods of measuring performance are benchmarking and the Balanced Scorecard.

Benchmarking is a systematic process of measuring an organization's products, services, and practices against those of an organization that is a recognized as a leader in the studied area.

The Balanced Scorecard represents a set of indicators that assures a unitary presentation of the management vision regarding the performance control and supposes the relational approach on four dimensions: financial perspective, customers' perspective, internal business processes and organizational learning and growth perspective. A very useful improvement of the balanced scorecard is the total performance scorecard. The latter is defined as the systematic process of continuous, gradual, and routine improvement, development and learning, focused on a sustainable increase of personal and organizational performances. This framework tries to mark the common road of an individual's goals and the company's goals, in order to obtain maximum satisfaction for both parts involved. The Total performance Scorecard combines two separate balanced scorecards: the personal one (PBSC) and the organizational one (OBSC). Correlating the two of them is the perfect framework for improving the entire organization, as well as for the development of human potential.

Since these areas are critical determinants of organizational performance, HR leaders are missing a great opportunity to add value if they do not develop much better metrics and analytics. In high-performing HR departments they rely on data-driven practices and the organizations' business strategies. This allows them to make rigorous data-based decisions about human capital management and to engage in discussions with senior executives based on business strategy and data (Armstrong M., Baron A., 2002).

The human resource management is an integral part of how an organization is going to achieve its mission and only by integrating it into the organization's strategic plan one can keep people aligned with the objectives of the organization.

Human resources management alignment means to integrate decisions about people with decisions about the results an organization is trying to obtain and represents the last level in the Hierarchy of Accountability (figure no.2).



**Figure 2:** The Hierarchy of Accountability

Having quality professional practices and services is a must, but this shouldn't be the only focus of the best HR practitioners. They are able to combine their attention to basic administration while also making important strategic inputs that have a positive impact on the future of the organization. This is obviously not an easy balance to maintain, but is definitely not impossible either.

## 5. Further research

The strategic human resource management is a very interesting subject that could be the source of many studies, but one of the most interesting is the relationship between CEOs and the heads of the human resource departments. This type of research conducted in Romanian organizations would help understand how human resource management is perceived in national organizations and could provide us with the necessary information for the steps needed in order to achieve better results when it comes to fulfilling strategic goals.

## 6. Conclusions

While individualization of employment practices and team-based work may provide personal and organizational flexibilities, aligning HR and organizational strategies for competitive advantage has become more prominent (Horwitz F., et al., 2003) and the perception of human resources management is changing, more and more organizations considering it a value-added business partner. SHRM can be regarded as a general approach to the strategic management of human resources in accordance with the intentions of the organization on the future direction it wants pursue.

The human resource management literature makes clear that HR is always involved in execution of an overall strategic plan, but infrequently involved in the initial development of that plan and this needs to change in the new economic context. CEOs recognize that human resource professionals have a role to play in supporting and promoting the value of HR within the company, but are also looking for senior HR executives themselves to be more assertive in demonstrating their value.

Alignment between executives, the human resource department and employees is critical to ensuring that the HR team is designing and developing initiatives that drive business performance and enable people to achieve results.

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# ORGANIZATIONAL CULTURE AND STRATEGY. HOW DOES IT WORK? AN EMPIRICAL RESEARCH

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**Abstract:** *Why do some companies fail in their efforts to implement competitive strategies? Why do others win in implementing competitive strategies? Of course the reasons behind every fail and every win are numerous and can be related to insufficient resources, lack of information, changes in the external environment, etc. But let's say that two companies, trying to implement a competitive strategy, have the necessary resources, information and the environment is relatively calm. Although the two companies have the same opportunity in implementing the strategy, only one is successful in its efforts, while the other fails. Why? One possible answer and one of the most plausible causes behind this fail is the resistance to change. Strategies are designed to increase the company's overall performance by strengthening its capabilities and core competencies and by eliminating the inefficient activities and processes. But, this phenomenon will change the way in which things are done inside the company. This, in term, will change the culture which defines that organization. Facing this threat, employees will try to maintain things as they were, while managers are trying to implement the new strategy to gain competitive advantages. As a consequence of this conflict, the new strategy will most likely fail in its implementation, causing negative effects on the company. This article wishes to provide a theoretical and empirical view on the importance of having a dynamic organizational culture designed to sustain new strategic initiatives. To underline this importance, an empirical study was conducted on several Romanian construction companies with the intent of revealing the correlations between a supportive culture and strategy. In conducting this study the main objective was to reveal if companies characterized by a supportive and dynamic organizational culture are more likely to have a strategy formulated and implemented.*

**Keywords:** *organizational culture, strategy, strategic management, construction industry*

**JEL classification:** *M14, L74, L20*

## **1. Introduction**

The business environment today is forcing the companies to focus their efforts onto gaining more clients and increasing the overall level of efficiency and performance. Thus, the quest to identify sustainable competitive advantages has become more important than ever before. According to Michael Porter (Porter, 1985, p. 1) competition is the most important element which influences the companies' success or fail, by dictating the action which must be taken regarding performance and innovation, organizational culture and efficient implementation of competitive strategies designed to position the company in a more favorable location on the

market.

## 2. Organizational culture

Organizational culture, according to Dess, Lumpkin and Eisner (Dess *et al.*, 2007, p. 323) can be defined as a system of shared values, representing the company's most important elements, and beliefs, representing the way in which things are done inside the company, that shape the employees, the organizational structure and control systems, in order to produce commonly accepted behavioural norms. Moreover the way in which people behave is influenced by the ideologies, symbols and core values shared throughout the company (Hitt *et al.*, 2006, p. 377). Thus, organizational culture consists of the way in which a group of people can be defined as a model of shared assumptions assimilated by all of its members as a consequence of solving the problems related to external adaptations and internal integration, and which has functioned well enough in order to be considered valid, and thus transmitted to new group members as the correct manner to perceive, judge and feel different problems (Schein, 2004, p. 17).

One of the biggest challenges faced by managers, in trying to fit the new strategy into the cultural context present inside the company, is how to analyze an intangible element like organizational culture. To overcome this problem, Tony Morden (Morden, 2007, p. 381) set up an analysis based on five main variables: *value judgement, vision, value system, behavioural standards and norms* and *perceptions regarding needs, priorities and wishes*.

*Value judgement.* Different behaviours are actively influenced by the employees' individual and shared judgements which are related to the company's mission, objectives and sets of values. These judgements are based on certain values, like focusing on the interests of clients, shareholders or stakeholders. These values and judgement values define and shape the priorities of the entire strategy formulation and implementation process.

*Vision.* Vision represents the main elements which connects and integrates the company's judgement values and ideologies. It is imperative for the vision to be formulated in such a manner in which to ensure a proper alignment between strategy and organizational culture.

*Value system.* The value system is comprised of the company's vision and value judgements, and represents the foundation onto which the company's mission, strategy and behaviours are defined and implemented inside the company.

*Behavioural standards and norms.* The norms and standards shape the employees' behaviour and their attitude, also influencing the manner in which they relate to their co-workers, their leadership style and the decision making process.

*Perceptions regarding needs, priorities and wishes.* By establishing the objectives related to sales, market share, quality, value chain management, risk management and ethics, the perceptions related to needs, priorities and wishes directly influence both the strategic formulation process and the decision making system.

According to Pearce and Robinson (Pearce & Robinson, 2007, p. 378-382) today's managers come across difficulties in understanding the relationship between organizational culture and the key factors which influence the success of the strategic actions taken by the company in order to gain competitive advantages. The core activities undertaken by the company are influenced by a series of key components, such as structure, employees, systems, managerial style, thus

implementing a new strategy requires managers to continuously adjust these components in order to meet the requirements set by the new strategy. Consequently, managing the organizational culture – strategy relationship requires a high level of attention in ensuring that the changes generated by the new strategic option are compatible with the existing organizational culture.

Although the need for change may be driven by a variety of reasons, which may include a downfall in financial results, government legislations, an increase in competition or the appearance of technological innovations, managers must, in all of these cases, alter the existing organizational culture in order to be able to implement the strategies required to increase the company's performance. One approach to changing the existing culture is a process of *unfreezing* and *refreezing* (Hannagan, 2007, p. 155). As a consequence of external pressure managers may feel that there is a need for change in the organization, in order to ensure its survival. The main issue, in this case, is how to convince everyone in the organization that change is needed and that the current culture needs *unfreezing*. At this stage the need for change is obvious, thus individuals should easily recognize and accept it. Unfortunately, there will be members in the organization who will refuse to accept and embrace the need for change, considering that the existing culture is the best way of conducting the day to day activities. In this situation, the leadership of the company must engage in a communication campaign design to foster the new values, attitudes and behavior. Also, the use of consultation and retraining can provide a useful mechanism in determining the personnel in accepting the necessary changes. Following this process, the new practices must be locked in place inside the organization as the new way of doing things. This is called *refreezing* and represents the final step in changing the organizational culture with a new one, designed to improve the company's performance and its competitive power.

In order to change the culture, in an efficient way, and ensure its total support for the new strategy, companies must undertake a series of main activities (McMillan & Tampoe, 2000, p. 234):

- ✓ Sell the new strategic intent.
- ✓ Interpret the existing organizational culture.
- ✓ Develop group decision-making skills.
- ✓ Introduce innovative mindsets that welcome change.
- ✓ Develop skills and knowledge base.
- ✓ Encourage staff to feel secure.
- ✓ Develop means of helping staff deliver consistent performance.
- ✓ Enable accessibility to management during periods of change.
- ✓ Encourage thinking that focuses on the outset world.

Due to the fact that organizational culture sets the behavior of employees, motivating them to achieve the company's strategic goals, it influences the effectiveness of the strategy formulation and implementation process. In order for the new strategy to gain sustainable competitive advantages, it must be implemented in an efficient manner and it has to be supported by all the members of the organization (Abass, 2003, p. 207). As a consequence, managers must link the strategy with the existing organizational culture, if it is possible, and also, they have to create and sustain a flexible and dynamic culture throughout the organization. This is necessary, in case the new strategy brings significant changes at a cultural level. Having a flexible culture ensures a more efficient adaptability of the entire personnel to the new goals

and activities. More, a dynamic culture will actively support the implementation of the new strategy and will encourage everyone not only to match the strategic goals, but to overpass them.

### 3. Strategy

Choosing the right strategy represents one of the key elements in strategic management, companies focusing solely on their own future and the means to cope with the numerous external influences and pressures. Also, it is very important for the new strategies to lead to sustainable competitive advantages. In order to achieve this, they have to be realistic in evaluating the external influences and, also, the internal capabilities and core competencies (Johnson & Scholes, 1999, p. 255, Dikmen *et al.*, 2009, p. 291). In order to be sustainable, Aras and Crowther (Aras & Crowther, 2010, p. 568) emphasize four main aspects which need to be recognized and analyzed: *social influence*, which shows the strategy's influence in terms of social contracts and other stakeholders, *impact on the environment*, consisting of the entire array of actions which mark the environment, in one way or another, *organizational culture*, which is described previously in this article and *finances*, represented by the actual and future financial result.

It is imperative for the new strategy to be chosen and formulated in an efficient way, especially by understanding very well the pros and cons of every strategic alternative. This is extremely important due to the fact that, as shown previously, the new strategy might bring significant changes in the organization. These changes need to be embraced by all the members of the organization in order to meet the strategic goals. Following this, the organizational culture needs to support the new strategy, and this support can be achieved by transforming the strategic process in a highly transparent one, offering detailed explications and ensuring the participation of all personnel (Karnani, 2008, p. 515).

Managers are responsible with choosing the best strategy and they must identify and explore all the consequences of the new strategy, externally and internally, in order to ensure its success (Finlay, 2000, p. 371). On the other hand, companies are forced to take into consideration certain elements, which actively determine the nature of the strategy, elements like the *structural conditions* in which the company conducts its business, its own *capabilities and core competencies* and, also, its *past experience* (Kim & Mauborgne, 2009, p. 74). Considering all of above, the new strategy consists of the company's decision related to (Finlay, 2000, p. 341) *its offers, strategic positioning, necessary resources, ways to access the resources and financing sources*.

Strategy formulation is not reserved only for top level managers. Mid-level and lower-level managers must be involved in the strategy making process, especially due to the fact that in large companies there are four levels of strategies: corporate, divisional, functional and operational. In case of small companies, there are only three levels of strategy: company, functional and operational (David, 2009, p. 180).

At a corporate level, strategies can be used in order to diversify the company, and its offer, whether this diversification is related to the main business and managers are seeking economies of scale, or unrelated, if the managers wish to go beyond its main business activity. In some cases, however, certain external and/or internal factors can cause negative effects on the company, forcing it to enter into a defensive mode. In this situation retrenchment can be used to minimize loses, and eliminate

all the redundant activities, in order to fortify the core competencies and strengthen the company. Unfortunately, this strategy will not offer a guarantee that the company will be able to comeback, and sometimes managers are faced with the necessity of selling divisions of the company, a strategy called divestiture, in order to raise money for future investments, or to sell all the company's tangible assets, a strategy called liquidation. However, companies can increase their performance by creating strategic alliances with other companies, in order to combine the efforts and to create innovative products and services, and also to gain competitive advantages.

At the business unit level, the best known and most widely used strategies are *differentiation*, *overall cost leadership* and *focus* (Porter, 1998, p. 35). These are also called Porter's generic strategies and are intended to be a source of competitive advantages. Differentiation consists of producing goods and/or offering services which are different, even unique, in comparison with the same products on the market, with the intent of building an individual image in the consumers' mind. Overall cost leadership emphasizes the importance of producing standardized goods, in relatively high volumes, in order to keep to a very low level the costs per unit. Companies implementing a focus strategy produce good or offer services to a very narrow group of customers. The aim of the strategy is to best satisfy the needs of these customers, by offering goods which are unique and offer high value for the customer and a high price, or to offer products and/or services to that small group of customers at the lowest price on the market.

We must emphasize the fact that no matter what strategy is chosen, it will generate changes, which will, in term, lead to an opposition of the employees, in the way of implementing this strategy.

#### **4. Empirical research**

Our research is focused on showing and understanding the relationships between a dynamic organizational culture, focused on supporting the strategic efforts, and the existence of a strategy in the construction companies in Romania. Although, from a theoretical perspective, as we have shown in the first two parts of this article, culture is a crucial determinant of the strategic process, I set out to analyze this relationship from an empirical point of view.

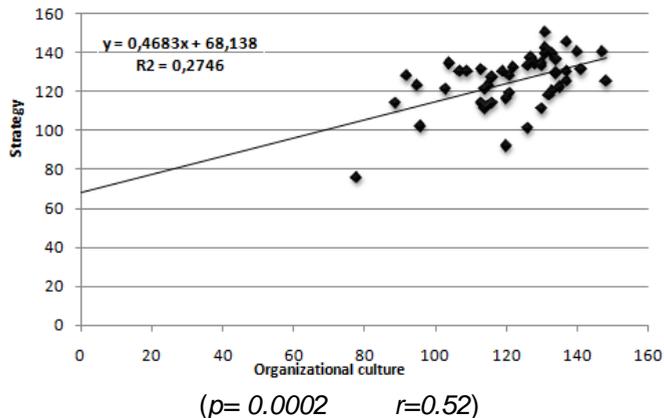
The research presented in this paper is part of a much wider research, focused on the Romanian construction industry, and it shows the correlations between organizational culture and strategy, based on the result obtained from a number of eight companies from the construction industry.

As a tool for research we used a number of two questionnaires, one focused on the organizational culture and the other one focused on the strategic efforts undertaken by the company. The organizational culture questionnaire is aimed in identifying the cultural particularities present inside the company, more specifically the degree in which the culture supports a strategy orientated view. From a strategy perspective, we sought out to evaluate the strategic efforts undertaken by the companies in their quest for competitive advantages.

We choose the questionnaire as a research tool first of all because of the high volume of information which can be obtained, and also because it is standardized, enabling researches to get relevant statistical data.

The eight companies involved in our study provided a total number of 23 valid questionnaires, which were statistically analyzed. The normality test's values which

were obtained showed that the data collected is very well modelled and has a normal distribution. Furthermore, the value of the Pearson's linear correlation coefficient ( $r$ ) which has to be above 0.29 and that of the significance of correlation coefficient ( $p$ ) which has to be below 0.05, revealed a powerful connexion between the existence of a dynamic organizational culture and a strategic process intended to gain competitive advantages.



**Figure 1:** The relationship and correlation between organizational culture and strategy

Due to the fact that this is only a preliminary research, which will be extended to a much numerous statistical population, the results of this research have certain limitations. First of all, only a number of eight companies have been analyzed so far, and second, the majority of these companies are based in the Northern part of Romania, leaving the other regions unanalyzed. But, looking beyond these limitations we can conclude that companies which have a dynamic and strategy supporting organizational culture are much likely to have a competitive strategy formulated and implemented in order to gain sustainable competitive advantages. In other words, an organizational culture in which the employees have a proactive attitude focused on responsibly and efficiently meeting the company's goals, in which managers offer their full support in solving the problems and where everyone is focused on constant professional developments and overcoming their own limits, is more likely to lead to a strategy focused view inside the company, in comparison to the companies in which all of the elements above are not present. Also, a culture, which is dynamic and adaptable, will allow companies to better overcome the problems which may occur both in the internal business processes and in the external environment.

## 5. Conclusion

Companies "fighting" in today's extremely competitive business environment are constantly seeking new ways to ensure an increase in performance and development, especially by gaining sustainable competitive advantages as a result of implementing new strategies. Having the perfect strategy will not guarantee success; companies need to be able to implement the strategy in an efficient manner. This means not only to have the necessary resources required to implement

the strategy, but also to ensure that the organizational climate is favourable towards the new strategy.

As we have stressed out previously in this paper changes will be generated by the new strategy, changes which will alter the way in which things are done inside the company. This may cause employees to oppose the new strategy, as they try to maintain things unchanged in their working environment. It is very important, in ensuring the success of the strategic process, for managers to adopt a high level of transparency and to communicate very efficiently the benefits of the new strategy, in order to show that it will influence, in a positive manner, the organisation and its members. Also, it is important that managers create a dynamic organizational culture. As we have shown in the research, presented in this article, a dynamic culture focused on supporting strategic initiatives will actively influence members to take initiatives in formulating and implementing strategies with the intent of gaining sustainable competitive advantages.

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## MONTE CARLO SIMULATION: IMPORTANT MANAGEMENT TOOL IN EVALUATING DECISIONS UNDER RISK. CASE STUDY: LAUNCH A NEW PRODUCT OF SHOES

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**Abstract:** *Decisions are a result of choices made between several alternatives and will affect all participants in the decision-making process. In this paper we analyze the Monte Carlo simulation as an important management tool in evaluating decisions under risk. The method is particularly useful in simulating decision problems. For example, the profit that could be achieved if a company launches a new product may depend on a number of factors (market share, advertising, production costs, launch costs, the lifetime of the product, etc. The company manager should identify all factors that could affect profit and then to consider the large number of ways in which these factors may interrelate. In such situations it is recommended company manager to divide the problem into smaller parts, asking him to estimate the probability distribution for market share, for advertising, for the cost of launch. Once they were obtained it can be determined their combined effect in order to obtain the probability distribution of profit. Through computer can generate a large number of possible combinations of situations where you choose a particular course of action. Upon completion of the simulation possible combination will be generated mostly while the least possible combination will be generated less frequently. For exemplification we selected a company producing shoes in Cluj market who wants to launch a new model for autumn-winter 2013-2014. In the current period the company has limited production capacity, has a number of additional contracts honored and general economic crisis situation makes money availability to be extremely limited. Accordingly, the company will have to choose a single product to be launched next season. The company will have to decide which of the two new products to be launched on the market: a model of boots for men in business class or a new model of women's boots of the same class business. The company is not sure either production costs or sales level. Profit estimate involves going through several phases, and the first of these relates to the identification of factors that may or may influence the profit for both products.*

**Keywords:** *decision-making, simulation, Monte Carlo method, launch a new product.*

**JEL classification:** D81

## 1. Introduction

Because Monte Carlo simulation allows estimating the risk associated with a particular course of action often the studies in the field refer to this method as a method of risk analysis in the decision-making process.

Decisions are a result of choices made between several alternatives and will affect all participants in the decision-making process (Lazăr, Suciu, 2009).

In the opinion of specialists practicing and those in academia - U.S. Environmental Protection Agency (1997) and Vose, D. (2008) - Monte Carlo simulation method has a number of advantages over other methods of quantitative analysis of risk. In this sense, this paper focuses on explaining the Monte Carlo simulation method. By using this method, the distribution of all possible outcomes of an event is generated by analyzing a model several times, each time using input values selected by chance from the probability distributions of the components that make up the pattern.

The method is particularly useful in simulating decision problems. For example, the profit that could be achieved if a company launches a new product may depend on a number of factors (market share, advertising, production costs, launch costs, the lifetime of the product, etc. In this context, a decision maker will face a serious problem in making estimates of the profit that could be obtained. If the decision maker would be put in a position to answer the question "what is the probability that the launch of a new product record annual profit?", it would have great difficulty and would provide a relative response.

To answer this question, the company manager should identify all factors that could affect profit and then to consider the large number of ways in which these factors may interrelate.

In such situations it is recommended company manager to divide the problem into smaller parts, asking him to estimate the probability distribution for market share, for advertising, for the cost of launch. Once they were obtained it can be determined their combined effect in order to obtain the probability distribution of profit.

Due to the large number of factors and because many values that each of these factors can take, there could be an infinite number of possible combinations that may affect company profits (Ionescu and Cazan, 2007).

Such a problem can be solved successfully by using Monte Carlo simulation. The simulation assumes the existence of three main elements: real system (the real problem of decision maker), a computer system and conceptual model.

Through computer can generate a large number of possible combinations of situations where you choose a particular course of action. Upon completion of the simulation possible combination will be generated mostly while the least possible combination will be generated less frequently.

Using Microsoft Excel to perform simulations can be complemented with tools that can simulate in Excel, popular being @ Risk, an add-on program for Microsoft Excel and MS Project, developed by Palisade and available at [www.palisade.com](http://www.palisade.com) and Crystal Ball, that is available at <http://www.oracle.com/us/products/applications/crystalball/index.html>.

There are also available free tools that can be used to perform a Monte Carlo simulation, for example SimulAr is an add-on program for Microsoft Excel and is distributed as "emailware". The program was developed by Luciano Machine at the National University of Rosario, Argentina, and is available at [www.simularsoft.com.ar](http://www.simularsoft.com.ar). It adds probability distribution functions for performing

Monte Carlo simulation and risk analysis under uncertainty. It also provides the ability to correlate variables and adjust distributions to data.

So profit is calculated for each possible combination and then will quantify the frequency of profits that were generated, and finally the manager will determine the likelihood of profit expectation. To use the simulation in a decision problem it is necessary to go through the following steps:

- 1) Identify each factor that may influence the profit for each course of action;
- 2) Development of a model, noting how these factors relate;
- 3) Take a sensitivity analysis to identify factors that need to obtain probability distributions;
- 4) Establishment of probability distributions for the factors that were identified in the previous paragraph;
- 5) Making Simulation;
- 6) Application of sensitivity analysis of results obtained from simulation;
- 7) Comparison of results for various alternative courses of action and identify preferred course of action.

## **2. Case study: Using Monte Carlo simulation for the election of a new product that will be launched on the market.**

A risk decision situation is a company producing shoes in Cluj market who wants to launch a new model for autumn-winter 2013-2014.

In the current period the company has limited production capacity, has a number of additional contracts honored and general economic crisis situation makes money availability to be extremely limited. Accordingly, the company will have to choose a single product to be launched next season.

The company will have to decide which of the two new products to be launched on the market: a model of boots for men in business class or a new model of women's boots of the same class business.

Since the company has launched such products on the market and there are similar products on the market, means that information is available (which may be collected by the company) for making the decision. Consequently, decision-making situation is closer to risk than uncertainty. The company is not sure either production costs or sales level.

Profit estimate involves going through several phases, and the first of these relates to the identification of factors that may or may influence the profit for both products.

### **2.1. Identifying influencing factors**

Economic analysis conducted by the company's management led to the identification of the following factors which affecting profit:

- Estimated quantity of products sold (units);
- The estimated price for each product marketing (RON/ piece);
- The fixed costs of the company (their size is independent of actual production work and includes training costs of production, with utilities, salaries of management staff, to the service etc.).
- Variable costs (these costs depend directly on the size and production activities include: costs of raw materials, direct labor, etc.).

In any analysis of this type, variable costs are easier to estimate both per unit and overall, while fixed costs are more difficult to spread, as the company produces a

wide range of products and profitability analysis must take into account a fair allocation of these expenses. In this case fixed cost allocation is proportional to the value of production of each product compared to the total value of production for all products.

**2.2. Design a mathematical model that meets current needs**

In this case, taking into account the factors identified above will leave the relationship that highlights all items, profit formula.

$$P_r = (P - c_v) \times Q_{es} - C_f$$

Pr = expected profit,

P = estimated selling price;

c<sub>v</sub> = estimated unit variable cost;

Q<sub>es</sub>= Estimated quantity of products to be produced and sold;

C<sub>f</sub> = estimated fixed costs.

**2.3. Sensitivity analysis to identify factors required to obtain the probability distribution.**

Following our approach we perform a sensitivity analysis for each of the two products to see to what extent each factor influences the variable of interest – profit. If, after review finds that one of the factors has a significant influence on the variable of interest, will be decided using a single value, one that is most likely.

In sensitivity analysis will identify those factors that are required to assess the probability distributions. For each product that influence profit we identify three values: minimum value, maximum value and most likely value.

*Sensitivity analysis for "boots for men".* Among the influencing factors is considered that the price is known by the company and is set at 150 Euro / piece. The following table presents the values of each factor. These values were provided by the management company

**Table 1:** Estimate values for "boots for men"

<b>Factor</b>	<b>Symbol/ U.M.</b>	<b>Minimum value</b>	<b>The most likely value</b>	<b>Maximum value</b>
Estimated quantity of products to be produced and sold	Q <sub>es</sub> (units)	500	600	900
Fixed costs estimated	C <sub>f</sub> (RON)	20.000	25.000	30.000
Estimated unit variable cost	C <sub>v</sub> (RON/units)	70	80	110

Next we analyze the possible values of profit changes under the influence factors.

**Table 2:** Profit values while factors influencing change

	minimum	likely	maximum	% Variance
Price	150	150	150	
$Q_{es}$ (units)	10000	17000	38000	53,69863
$C_f$ (RON)	22000	17000	12000	6,849315
$C_v$ (RON/units)	23000	17000	-1000	39,45205
Total	-	-	-	100

Sensitivity analysis is presented through chart indicating to what extent a given factor is important in the analysis.

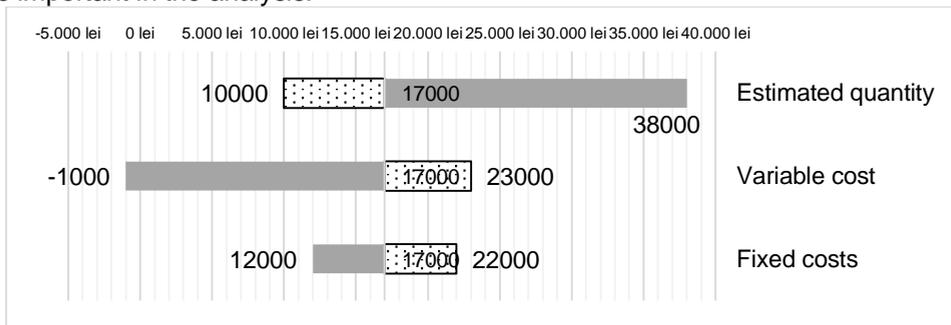
**Figure 1:** Tornado diagram - influence of the product "boots for men"

Figure 1 shows the Tornado diagram for the first product considered "men's boots". The analysis of this chart is noted that the factor, which influencing most the profit is amount of product estimated to be produced and sold, and at the opposite end fixed costs. Since fixed costs do not significantly influence the value of the variable of interest (profit) we still use a single value for the fixed costs, the most likely (25 000 RON).

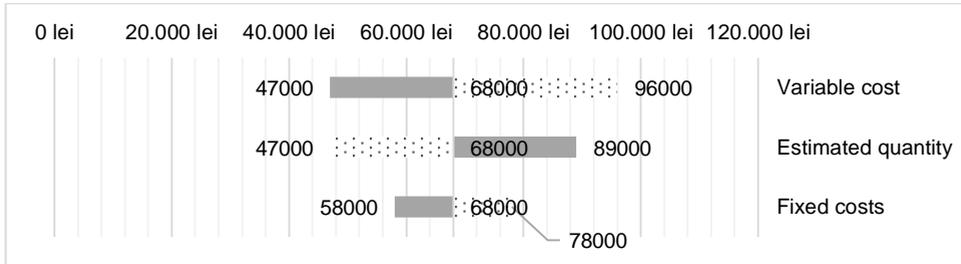
*Sensitivity analysis for the second product "ladies boots".* Among the influencing factors the price is known by the company and is set to a value of 290 RON/ piece. The following table presents the values of each factor. These values were provided by company's management.

**Table 3:** Estimate values for "ladies boots"

Factor	Symbol/ U.M.	Minimum value	The most likely value	Maximum value
Estimated quantity of products to be produced and sold	$Q_{es}$ (units)	550	700	850
Fixed costs estimated	$C_f$ (RON)	20.000	30.000	40.000
Estimated unit variable cost	$C_v$ (RON/units)	110	150	180

**Table 4:** Profit values while factors influencing change

	minimum	likely	maximum	% variance
Price	290	290	290	
Q <sub>es</sub> (units)	47000	68000	89000	38,64184
C <sub>f</sub> (RON)	78000	68000	58000	8,762322
c <sub>v</sub> (RON/units)	96000	68000	47000	52,59584
Total	-	-	-	100



**Figure 2 -** Tornado diagram- influence of the product "boots for women"

Figure 2 shows Tornado diagram for the second product analyzed 'boots women'. From the analysis of this chart it can be observed that the factor, which influencing most the profit are again variable costs (variation being 52.59%), then estimated quantity to be sold (with a variance of 38.64%) and the least influencing factor is, as with previous product, fixed costs, whose variation is 8.76%. Since fixed costs do not significantly influence the value of the variable of interest (profit) we still use a single value for the fixed costs, the most likely (30,000 RON).

#### 2.4. Establishment of probability distributions

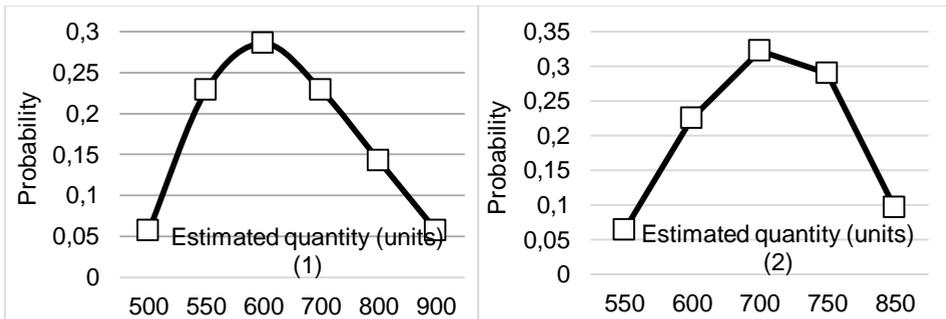
The next step in determining the profit for each item of footwear is to identify probability distributions for each factor. These were determined by the graphical method.

**Table 5:** Probability distributions for the two products analyzed

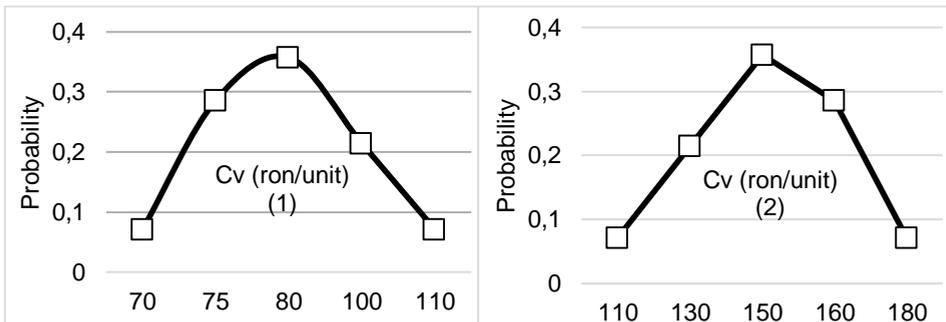
Boots for men			Boots for women		
Estimated quantity	The length of each line	Probability	Estimated quantity	The length of each line	Probability
500	2	0,057143	550	2	0,06451613
550	8	0,228571	600	7	0,22580645
600	10	0,285714	700	10	0,32258065
700	8	0,228571	750	9	0,29032258
800	5	0,142857	850	3	0,09677419
900	2	0,057143			
Total	35	1	Total	31	1

Boots for men			Boots for women		
Cv (ron/unit)	The length of each line	Probability	Cv (ron/unit)	The length of each line	Probability
70	2	0,071429	110	2	0,071429
75	8	0,285714	130	6	0,214286
80	10	0,357143	150	10	0,357143
100	6	0,214286	160	8	0,285714
110	2	0,071429	180	2	0,071429
Total	28	1	Total	28	1

The next step is to plot the probability distribution for the estimated amount to be sold 'boots men' (1) and "boots women" (2).



**Figure 3** – Probability distribution for the estimated amount to be sold 'boots men' (1) and "boots women" (2)



**Figure 4** – Probability distribution for the variable costs of products 'boots men' (1) and "boots women" (2)

## 2.5. Making simulation

After we obtained probability distributions for each factor, we realize simulation in order to obtain the probability distribution of profit. The first product for which we perform simulation is "boots for men". To achieve the simulation we used the Microsoft Office Excel. Program generated two random numbers the first representing the estimated quantity of products to be produced and marketed and the second number representing variable costs. For example for the first simulation we obtained:

$$\text{Profit} = 900 \text{ unit} \times (150 \text{ ron} - 80 \text{ ron}) - 25000 \text{ ron} = 38000 \text{ ron}$$

To obtain a probability distribution as close to reality we conducted 1000 simulations. In the following table we present profits from these simulations.

**Table 6:** Profit from 1000 simulations – "boots for men"

Simulation number	Estimated quantity of products to be produced and sold		Unit variable cost estimated (ron/unit)		Fixed costs	Profit
	Random number	Units	Random number	Ron		
1	93	900	42	80	25000	38000
2	0	500	79	100	25000	0
3	20	550	89	100	25000	2500
4	7	550	7	75	25000	16250
5	49	600	78	100	25000	5000
...	...	...	...	...	...	...
500	93	900	88	100	25000	20000
501	3	500	49	80	25000	10000
502	79	800	0	70	25000	39000
503	2	500	50	80	25000	10000
504	21	550	54	80	25000	13500
...	...	...	...	...	...	...
996	94	900	36	80	25000	38000
997	66	700	12	75	25000	27500
998	70	700	8	75	25000	27500
999	53	600	96	110	25000	-1000
1000	11	550	42	80	25000	13500

Average profit for "boots for men" obtained from the 1000 simulations is 17,647.25 RON

**Table 7:** Probability distribution of profits from the 1000 simulations for product "boots for men"

Profit	Number of simulations	Probability
de la -5000 la 0	66	0,066
de la 1 la 10000	209	0,209
de la 10001 la 20000	397	0,397
de la 20001 la 30000	179	0,179
de la 30001 la 40000	124	0,124
de la 40001 la 47000	25	0,025
<b>Total</b>	<b>1000</b>	<b>1</b>

From the above table it is observed that as a result of 1000 simulations profit recorded also negative values. Most of profit values were recorded between 10,001Ron and 20,000 Ron (397 simulations) representing a 39.7% probability of occurrence. Also there have been 209 cases in which profit ranged between Ron and 10,000 Ron, which is a probability of 20.9% and 179 cases in which profit ranged between 20001 Ron and 30.000 Ron with a probability of 17.9%.

The second product that we realized simulation is product "boots women".

For example for the first simulation we obtained:

$$Profit = 700 \text{ units} \times (290 - 130) - 30000 = 82000 \text{ Ron}$$

In the following table we present profits from these simulations.

**Table 8:** Profit from 1000 simulations – "boots for women"

Simulation number	Estimated quantity of products to be produced and sold		Estimated unit variable cost (Ron/unit)		Fixed costs	Profit
	Random number	Units	Random number	Ron		
1	43	700	17	130	30000	82000
2	80	750	68	160	30000	67500
3	33	700	43	150	30000	68000
4	33	700	94	180	30000	47000
5	41	700	58	150	30000	68000
...	...	...	...	...	...	...
500	46	700	36	150	30000	68000
501	1	550	61	150	30000	47000
502	44	700	60	150	30000	68000
503	68	750	64	160	30000	67500
504	94	850	28	150	30000	89000
...	...	...	...	...	...	...
996	83	750	96	180	30000	52500
997	34	700	79	160	30000	61000
998	14	600	77	160	30000	48000
999	39	700	80	160	30000	61000
1000	86	750	71	160	30000	67500

Average profit for "boots for women" obtained from the 1000 simulations is 67.725 RON

**Table 9:** Probability distribution of profits from the 1000 simulations for product "boots for women"

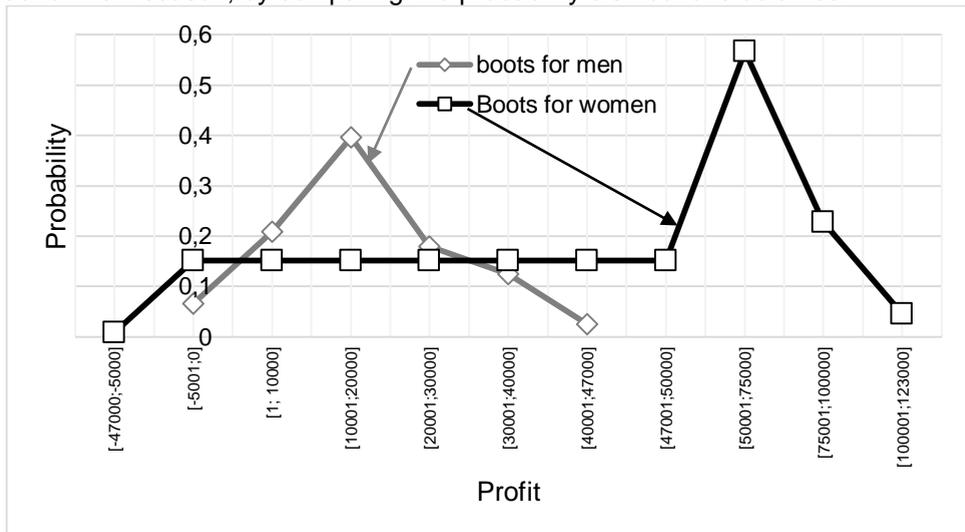
Profit	Number of simulations	Probability
de la -47000 la 0	8	0,008
de la 1 la 50000	151	0,151
de la 50001 la 75000	567	0,567
de la 75001 la 100000	228	0,228
de la 100001 la 123000	45	0,045
<b>Total</b>	<b>1000</b>	<b>1</b>

From the above table it is observed that as a result of 1000 simulations profit recorded also negative values. Most of profit values were recorded between 50,001Ron and 75,000 Ron (567 simulations) representing a 56.7% probability of occurrence.

Also there have been 228 cases in which profit ranged between 75,001 Ron and 100,000 Ron, which is a probability of 22.8% and 151 cases in which profit ranged between 1 Ron and 50,000 Ron with a probability of 15.1%.

### 2.6. Comparison of alternative courses of action

At this time the company manager must decide who will be the product that it will launch next season, by comparing two probability distributions obtained.



### 3. In conclusion

From both the graphics and the analysis presented in previous tables we observed that in both cases may occur losses. The first product "boots for men" these losses are likely to occur by 6.6% and range between -5000 and 0 Ron and in the case of the second product, 'boots women' probability is 0.8% and range between -47000 and 0 Ron.

Probability of profit for the first product to be located between 10001 Ron and 20000 Ron 39.7% being the highest value.

For the second product most likely (56.7%) is for profit ranged between 50001 Ron and 75000 Ron.

Given this analysis, company manager will decide, naturally, the launch of "boots ladies' autumn-winter season. Due to the uncertainty and risk involved in these decision problems, company management has encountered great difficulties in taking that decision that will maximize profit on the one hand, but that will minimize the likelihood of a loss on the other.

So now management of production companies in Romania may resort to various tools which can improve decision making, instruments known as decision trees, sensitivity analysis, charts, Tornado Monte Carlo simulations which can be useful for the management of the whole company.

Taking into account the fact that it is based on numerical data obtained by performing multiple simulations, add value to this technique. It also helps to eliminate any bias in the selection of alternatives when planning risk. Monte Carlo simulation provides many advantages, but its reliability of results depends on the accuracy of the values and patterns of correlation if they are specified during simulation. Therefore, a particular attention should be given when determining the value range and selection of appropriate distribution, because the results will not be accurate. In other words, the data provided by the manager are vital for the successful of simulation and the manager must have solid knowledge in the field of which take part the simulated situation.

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***SUB-SECTION: MARKETING***



# THE PUBLIC SERVANTS' PERCEPTIONS REGARDING THE COMMUNICATION PROCESS WITHIN LOCAL PUBLIC ADMINISTRATION – A QUALITATIVE APPROACH

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**Abstract:** *The goal of this paper was to assess the communication efficiency within local public administration in Crisana Region. It also aims to explore factors predicting employees satisfaction regarding communication process. Using qualitative research were investigated public servants' opinions on the communication in local public administration. As an exploratory study, it was performed a content analysis of information gathered from the interviews organized in the two most largest local public institutions in Crisana Region. The particularities of the internal and external communication are analyzed. In addition, it was taken into consideration the importance of citizen involvement in local government and the requirements for the citizen oriented applications. By analyzing data it was possible to highlight the aspects that please or discontent the clerks regarding the communication with their colleagues, their chiefs, the citizens they serve or other institutions. Therefore every participant in the study presented a positive and a negative critical incident on local communication. It was revealed the crucial role of the dispatch to obtain information by public servants on the one hand and citizens on the other hand. Measures for ensuring the institutions transparency and fairness are described. The public servants emphasized some aspects that are characteristic to the communication within large institution inference. This paper offers a view on the communication process seen from the inside. The collected data are used for verifying the hypotheses regarding the difference in the public servants' perception regarding internal and external communication within local public communication. The interviewed employees stated that authorities granted more importance to external communication than internal communication. Accordingly, is needed an improvement to the means and applications through which internal communication operates because the participants are less satisfied with it. The research findings, certainly reflected the genuine desire of public servants to find better ways to communicate with the public.*

**Keywords:** *public servants, external communication, internal communication, transparency, citizen involvement*

**JEL classification:** *M31*

## **1. Literature review**

For the public sector, communication represents an important but delicate part among its responsibilities. Modern public organizations have in the centre of the concerns aspects regarding efficient communication, citizen involvement in public decisions and increasing performance and quality.

Vos (2009: 362) stated that communication quality measurement can clarify the added value that communication has for governmental organizations, support accountability and help set priorities for the organization's communication policy.

In his work Zerfass (2008) proposes a framework for a corporate communication scorecard, including elements such as rising stock values and community programs using sponsorship that do not correspond to the activities of municipalities.

Upton (1954: 152) pleaded for the implication of the citizens in the act of governing. Despite the fact that politicians and administrators declared interest in increasing public involvement in public decisions, there is considerable evidence to suggest that these efforts are not effective (Crosby, Kelly, and Schaefer, 1986, Kathlene, Lyn and Martin, 1991, Kweit, and Kweit, 1981).

Potentially, all of a community's residents have an interest in the findings of the most effective solutions for their problems, yet clearly everyone cannot participate in public decision making, and not every interested group can sit at the table to discuss the issues regarding their community (Pearce, 2005: 6). Although not all citizens show interest in the governments' activity, in policymaking, public organizations have to be transparent and need to communicate responsibly about unfinished matters that are still under discussion (Gelders, Bouckaert and Ruler, 2007: 34-35).

Yusoff, Ismail and Ali (2010: 236) stated that internal and external customers are essential to be the main contributing factors of organizational success. Therefore, understanding the internal and external customer's satisfaction is relatively crucial in order to ensure that the employees are able to provide the quality service delivery system at all times.

Consideration of how clerks view the internal and external communication from their institution might help to explain the overall communication process within local public administration.

Pandey and Garnett (2006: 41-42) designed a construct model of communication within public administration. The construct model had three dimensions of communication performance- interpersonal communication, external communication and internal communication which are influenced by goal clarity, organizational culture, organizational size and red tape. In addition, Robbins (1998: 260) states that smaller groups are faster at completing tasks than are larger ones (which affects communication performance), however, he points out that large groups do better if engaged in problem solving.

## **2. Research Methodology**

The research project followed a series of key stages. To collect data were organized in depth interviews in the two most largest local public institutions in Crisana Region. This investigation was used as exploratory qualitative research.

Considering roles of external and internal communications for the effectiveness of the overall communication process, it was hypothesized that:

H : There is a difference in public servants' perception of satisfaction regarding external and internal communication.

Because were investigated only the communities with a total population exceeding 200,000 citizens and by taking into account the specific of the region respectively Hungarian minority is dominant at a rate of approx. 20-25% of the total population, the communities selection was summarized to the Bihor County. Consequently, the

only communities that meet the two conditions were Oradea City Hall and the Bihor County Council.

The selection of the participants for the in-depth interviews was conducted by the management of each institution. Following the writing request and verbal discussions with the institution managers of those institutions, were approved the number of people who will participate and the interviews schedule. 40 in-depth interviews were conducted (23 interviews - Bihor County Council and 17 interviews - Oradea City Hall).

The interviews had some features:

- the discussions were audio-recorded for later analysis,
- the interview guide,
- at the end of the interview participants also completed a demographics questionnaire (eg age, sex, education, household income, geographic location).

The analysis of the data collected in the survey constitutes the bulk of the material reported. Exploratory data analysis emphasizes analyzing and grouping the mentions into equivalence classes, so that each equivalence class contains exactly those mentions that refer to the same discourse entity. Textual data are typically explored inductively using content analysis to generate categories and rigorous and systematic explanations.

In the paper are quoted participants mentions in order to confirm the results and highlight the most consistent perspectives.

### 3. Results

**Table 1:** Key in-depth interview

Exemple : P1/ IPOr, Q3- participant number 1, interview City Hall Oradea, question number 3 IPCJ- in-depth interview Bihor County Council IPOr- in-depth interview Oradea City Hall [researcher's interpretations]
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Source: Made by author

The overall appreciation of the internal communication has a predominantly positive orientation, but exploring in-depth the phenomenon we can note that the interviewees had different considerations regarding horizontal communication with colleagues beside vertical communication with management. In terms of horizontal communication- between colleagues within the institution were identified numerous references, most with positive orientation. Vertical communication with the heads was less nominated, but opinions were more obvious polarized than horizontal communication. Although internal communication is considered overwhelmingly positive, the vertical communication is predominantly negative oriented, but does not destabilize the general employee satisfaction. This phenomenon is due to the fact that the share of vertical communication across internal communication is lower, than horizontal communication.

Both Oradea City Hall and Bihor County Council are institutions with more than 100 employees and the communication process in these institutions involves a fairly long

communication channel. At Oradea City Hall five participants were dissatisfied but at Bihor County Council more than a half of the interviewees were dissatisfied with the internal communication. When the communication channel is longer there is the chance to appear blockages in the communication system.

P17/ IPOr, Q3 „... being a large institution we communicate quite arduous...”

P23/IPCJ, Q4 „... our organizational culture did not have the purpose of collaboration between colleagues, everyone keeps the information to himself...”

In order to function properly in both analyzed institutions internal communication needs improvement in terms of accessibility to the employees. In addition, the clerks who have direct contact with citizens considers appropriate the discussions with employees from the specialized departments to clarify certain issues that may leave room for interpretation.

P9/ IPOr, Q5 „...we have to know in advance what changes occur in the legislation, to be announced by the specialized department and we should have a discussion about it, in order to clarify certain aspects because one is to read the law and quite another to be explained, because not all of us are lawyers...”

Among the issues raised in discussion by the respondents regarding horizontal communication we can remember the following statements:

P10/ IPCJ, Q1 „... friendship and understanding between colleagues...”

The mentions of the employees participating in the in-depth interviews on the vertical communication were predominantly negative oriented:

P15/ IPCJ, Q5 „... the focus is on formal communication and yet the management of the institution obtain the required information on informal communication...”

The hypothesis was supported, the participants to the in depth interviews assed differently the external beside internal communication. External communication has received a special attention from the management of local authorities because it is the lever that allows relationships with most of its categories of public.

P10/ IPOr, Q4 „... Internal communication was ignored although it is often observed that the external depends on internal communication...”

Local councilors external communication was considered predominantly negative.

P23/IPCJ, Q3 „... One problem is that our county councilors are not involved in the external communication of the institution, you do not hear anything from them...”

The communication with other institutions predominantly neutral oriented. Among the issues raised in discussion by the interviewees it can remembered that there are certain unreliable institutions in responding to specific requests:

P4/ IPCJ, Q 5 „... when you are writing to the territorial administrative units and they are taken it seriously or not and you have to phone them, you must send an e-mail, you have to say exactly what they should do...”

Another aspect of the external communication is the communication with citizens. Public servants are dissatisfied with the citizens reticence and language.

External communication mediated by media is predominantly positive oriented, clerks are satisfied with the way institutions managed to inform the public through the press.

P5/ IPOr, Q4 „... we perceive the media as partners because through them we can simplify our work...”

It was identified a variable which was not initially considered - " the documents circuit " and is affecting local government communication within public institutions with a large number of employees.

P8/ IPCJ Q16 „[ responses dispatch] is delayed because of the gathering signatures so that a document could leave the institution...”

Regarding the variable "trust" several participants in the in-depth interviews stated that the politicization of local government structures is an important problem.

P7/ IPCJ Q5 „... it is experiencing the politicization of all organizational structures...”

The participants identified a number of human resource issues in local public administration:

- the inequitable division of tasks;

P6/ IPCJQ2 „... the work is not equally divided, one works more than another...”

- the respect towards the public servants;

P5/ IPOr, Q2 „... lately the public official is in the dust, being only an intermediate link between policy makers and citizens, is a buffer, and this is not quite correct...”

- the clerks` number is insufficient and the impossibility of employment;

P14/ IPOr, Q2 „... are some services where public servants are not enough...”

- high workload;

P16/ IPOr, Q2 „... often there are too many demands...”

- the lack of protection of employees against those who are beyond the counter;

P12/ IPOr, Q2 „... we are not protected as we should...”

- the appointments, employments and advancements in some cases are made on the political considerations;

P17/ IPOr, Q2 „... the appointments and often even the advancement are made on political considerations...”

- there are some problems regarding the rank advancement;

P22/ IPCJ, Q16 „... there are some problems regarding the rank advancement. For some of us is possible but for others no ...”

- the violence of language or on the institutions` property;

P15/ IPOr Q 16 „... two or three years ago a citizen came and told me that me - shit (...) although it was not ours fault...”

- the contact with the Rrom ethnic persons is difficult;

P5/ IPOr, Q5 „... Rrom ethnic persons are savages (...) they have urinated in the hallway...”

- the specific working characteristics are requesting;

P5/ IPOr, Q16 „... it is not the clerks` job here to make each persons` psychiatrist...”

- the lack of confidence in professional conduct of public servants.

P4/ IPOr, Q16 „... being here, having this job, giving hundreds of exams, without exaggerating, it can be considered that we are empowered to solve a problem...”

Regarding the activity of local government the civil servants participating in the interview noted that in the analyzed institutions citizen interest prevails. Most of the statements on this issue were mostly positive.

P5/ IPOr, Q6 „... a feature of local government is that it adapts very quickly to the citizens needs...”

The bureaucracy variable had a negative influence on local governments` communication.

P8/ IPCJ Q5 „... bureaucracy [is a problem] we have to do so many papers to get an answer...”

On one hand solving citizens` problem is considered by some interviewees as fulfilling his duties, and on the other hand is generating satisfaction when the citizen is satisfied with the answer and he is appreciating public servants` effort.

P9/ IPOr, Q16 „...when a citizen thanks after solving his problem, it is a satisfaction for having managed to relate with him, understanding the problem and helping the citizen in that matter ...”

Appreciated as important by the overwhelming majority of the participants in the in-depth interviews, citizen involvement is taken into account by local authorities depending on the institution managers attitude regarding this concern. The respondents mentioned that there are web site functions and services that facilitates public involvement.

P12/ IPCJ Q6 „... it is important [the citizen involvement] and even if they get involved their opinions are not taken into account...”

P8/ IPCJ Q6 „... citizen involvement is important and helps us because they give us many details that from the office we do not know...”

Citizens can get involved in local government activities in different ways with one common requisite: the desire to do something useful for the collectivity to which they belong to. Starting from desire, is necessary and the availability of time, sometimes physical presence, and in some cases citizen participation this may involve financial resources. Citizens can get involved with minimal effort by informing in the communities they live about local authoritys` projects on its new regulations or events that they organize. They may get involved by directing that 2% of income tax or even directly through participation in the public debates and events local authority derives.

P13/ IPOr, Q6 „... there are topics where the town halls` office where usually these debates are organized is full or sometimes just a few people are present. Depends on the importance of the topic...”

Overall positive appreciation on mayor`s activity or attitude was specified but none of the 23 participants in the in-depth interviews at Bihor County Council had no appreciation of the county council president.

P5/ IPOr, Q5 „... if you have coordinators, a mayor who understands these things and contributes to the welfare of city, things can be solved...”

Compared to written communication the assessment of the verbal communication was predominantly positive. The participants appreciated verbal communication for particularly rapid information transmission, but they mentioned a disadvantage of verbal communication between colleagues (when in the institution there is no team spirit and organizational culture in order to promote good relations between colleagues) is the misinformation or omission of some issues there because there is no "proof" of shared information, claims may or may not be challenged.

P19/IPCJ,Q16 „... it was requested a report data from a colleague who later denied the requested data and more recently we are working with internal memos to make sure we receive the necessary information...”

From civil servants point of view the local government response time was predominantly positive appreciated by most interviewees but there are perception differences between them regarding the legal duration for the responding a request, some participants said that legal period should be reduced, on the contrary, others considered that 30 days insufficient and would like an extension of the legal term.

P13/ IPCJ, Q5 „... the law allows too much time - 30 days or 15 days, It would be enough four or five days to communicate an answers, of course it depends on the subject of the request...”

P4/ IPOr, Q12 „... it should be extended this period because there are many requests, there are many cases, and we should invest more time to solve a case otherwise it is superficial...”

Among the issues that local public administration employees wish to be improved, internal communication and employees training is one of the most cited in this regard. Staff believes it would be appropriate to organize courses for employees development.

P8/ IPOr, Q5 „... communication with citizens could be improved (...) our way of expressing needs improvement ... ”

P4/ IPCJ, Q5 „... the way we communicate depends on each training, the approach, the seriousness, depends on your devotion to your profession...”

The employees attitude influences the communication process of local government in the sense that a positive, open, remarkable courtesy and attention to each citizen according to his specific needs facilitates contact between clerks and the public that they serve.

P1/ IPOr, Q2 „... A problem that should be solved is that every public servant should take responsibility for what he does and unfortunately this does not happen in all our departments...”

P8/ IPOr, Q5 „...It is true that is not always easy to smile and not always are moments to smile, it depends on citizens` problem. So, you must first identify the problem and then have a proper attitude...”

Adopting more and more specific elements provided by private service companies, local government assumes increasingly often customer orientation as more practical than just a established goal.

The communication materials available to citizens popularize certain achievements and inform on specific issues. Bihor County Council employees mentioned that inside the building there is a notice board where the public information is displayed. It is notable that Oradea City Hall has a particular concern regarding the efforts to improve the relationship with population, accordingly it can be seen the extra attention paid to the communication process. Oradea City Hall provides citizens informative flyers that have printed on the back the documents needed for different authorization or demands that citizens frequently required from City Hall.

P5/ IPOr, Q3 „... if you say the same thing ten times a day it is not sure that citizen understand you and you start to get bored, therefore we focused our attention on printing some flyers with the most requested information by citizens (...) thus we facilitate the communication and we would not bore each other...”

In order to communicate, citizens do not have to go to local government institution because the analyzed local public institutions had complied some of the citizens new requirements through adapted communication according to the citizens` needs.

P2/ IPOr, Q7 „...we are inviting them [citizens] to the meetings with citizens in the neighborhoods... and they can express their point of view, because if you want to make parking spaces at first you have go there and ask people there if they need those parking spaces...”

To facilitate citizens` contact with the institution, Oradea City Hall had created an one-stop counter /center for citizen service.

P1/ IPOr, Q3 „...our communication with citizens is better since last year [2011] was created a modern public relations center (...) and all departments are represented down there, citizens no longer have to walk through the institution...”

Internet communication has received special attention. On Oradea City Halls' website citizens can pay online their taxes, they can download forms and they can even schedule their wedding date.

P1/ IPOr, Q11 „... we are the only or one of the few halls in the country who send so many press releases, so we have activity as a newspaper...”

The institutions transparency, fairness was considered positive by most of the participants. The institutions transparency can be viewed from two angles:

- in terms of the employee who is properly and timely informed;
- from citizens' point of view whose authority should provide the necessary information.

P20/ IPCJ Q5 „... we should be informed when the organizational chart changes, so we should be informed before the change not to receive directly the disposal...”

As regards minority languages employees mentioned that there are some employees who speak Hungarian language.

P13/ IPOr, Q10 „... citizens of Hungarian minority who are addressing our institution in very small percentage use this possibility, maybe they do not know about this possibility...”

When participants were asked about the evolution of the communication process since 2010, the participants from Oradea City Hall positively appreciated the communication process of this institution but most participants in the interviews held in Bihor County Council considers communication to be constant or declining.

P2/ IPOr, Q15 „... the communication is improving every year because it was one of the main objectives of the new institution management...”

P13/ IPCJ, Q15 „...it is more difficult, worse...”

#### **4. Main findings and implications**

After coding the data collected during the interviews, it can be concluded that the majority opinions regarding communication process within local public administration had a positive orientation.

The interviewed employees stated that authorities granted more importance to external communication than internal communication. When the participants were asked about the aspects regarding the communication process that should be improved, most of them indicated internal communication. The hypothesis was supported, accordingly, is needed an improvement to the internal communication. The institution managers should set several objectives targeting the improvement of the internal communication.

The employees participating in the in-depth interviews mentioned that the documents circuit is affecting local government communication within public institutions with a large number of employees. The clerks stated that it takes about one week for a document to obtain the necessary signatures in order to be sent to the recipient.

The participants identified a number of human resource issues in local public administration: the inequitable division of tasks, the citizens' respect towards the public servants, the violence of language or on the institutions' property, the contact with the Rrom ethnic persons is difficult, the lack of protection of employees against those who are beyond the counter, the clerks' number is insufficient and the impossibility of employment, high workload, the appointments, employments and advancements in some cases are made on the political considerations, there are

some problems regarding the rank advancement, the specific working characteristics are requesting; the lack of confidence in professional conduct of public servants.

## **5. Conclusion**

The goal of this paper was to collect a series of essential events that can affect communication by facilitating it and increasing clerks satisfaction or on the contrary that disturb the communication process.

This study has limitations common to all qualitative research. It can be mentioned the following limitations:

- the short period for the data collection (16- 31 January 2012);
- employees participants were selected by institutions` management not randomly recruited;
- the denial of two employees from Bihor County Council and one from Oradea City Hall to be registered with the recorder during the in depth interview;
- interpretative research cannot be detached from the biases of researcher;
- using a single coder;
- due to the large amount of gathered information problems in classification have arisen.

Most of the statements in terms of local government communication were regarding the external and internal communication of these institutions and had a positive orientation.

In Oradea City Hall the evolution of communication in a positive way is the result of effective communication policies where the management of the institution has a special role: to establish standards and internal rules, in pursuing of their application and in motivating the staff. The employees motivation has an important role even more because in the current financial restrictions when managers of public institutions can not reward employees with increases in theirs salary, overtime pay or by offering holiday bonuses. For the other local public institution analyzed, an assessment instrument seems one of the few ways in which the communication performance can be measured and after that the institution managers can establish a number of objectives concerning the communication process.

The problem that the participants noticed is given by the difficulty of implication of the citizens in public affair problems. Citizens can get involved in local government activities in different ways with one common requisite: the desire to do something useful for the collectivity to which they belong to. A more important result is that public consultation and citizen involvement as means of legitimation can also be related to the managements` attitude regarding this concern.

The results supported Yusoff, Ismail and Ali (2010: 236) findings that there are ten critical success factors based on priority from the internal client`s point of views within local authorities: focus on both internal and external customers, coordination between departments, effective and efficient service delivery system, training for continuous improvement, top management as support system, good and reliable human resources, conducive job environment, application of latest technology and ICT, effective property and facility management, good management of office spaces. Further research is needed, however, to explicate the specific communication characteristics in terms of local government communication for the communities with a total population of more than 200,000 persons. Survey studies would seem an appropriate technique for obtaining data on local public communication process.

Further research require a more quantitative approach based on inquiry in order to investigate a larger sample of public servants. Under this conditions the survey could be used to validate the results found here.

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# THE IMPACT OF MARKETING EXPERIMENTS ON THE RELATIONSHIP BETWEEN SOFTWARE PRODUCERS AND THEIR RETAILERS

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**Abstract:** *This paper presents the results of a marketing experiment done on the Romanian software market. The main purpose of this research is to determine how the marketing campaigns of software manufacturers can influence the decisions of software retailers. Through this marketing experimental research an evaluation and an analysis of the impact that marketing policies of software companies have on the retailers from all over the country is made. Three different marketing campaigns were proposed to three groups of software vendors from the most important cities of the country. The total number of software retailers included in this experiment is of 45, and the marketing campaigns proposed by the authors in this experiment refer to the Microsoft brand. Promotion strategies such as: sales promotion by encouraging sales force and promotional pricing or even the policy of partner relationship management have a great impact on three aspects regarding software retailers: loyalty, purchase and resale intention and attitude towards a brand. The results of the experiment show a high interest for the strategy of promotional pricing. The representatives of the software vendors have a positive orientation towards sales promotion by encouraging sales force. Regarding the influences of the manipulations used in the experiment, the greatest impact on the loyalty of the software vendors it has the strategy of promotional pricing. Also the policy of sales promotion by encouraging sales force has the biggest impact on the purchase and sale intention of the software retailers. All three manipulations have also an impact on the attitude towards a brand of the vendors, but the differences are too small to determine which of the proposed stimuli has a greater impact on this aspect. The results of the experiment may help and could have a great influence on the future marketing decisions of manufacturers regarding the strategies and marketing policies used on the Romanian software market. Also, this paper represents a solid foundation for future marketing research that can involve all the stakeholders' categories from the Romanian software market.*

**Keywords:** *experimental research, software, stimuli, loyalty, marketing campaigns, software retailer.*

**JEL classification:** *M31.*

## **1. Introduction**

The main results from carrying out a marketing experimental research are presented. Through this experiment we attempted to analyse and quantify the impact that different marketing stimuli could have over the loyalty, purchase intention and attitude toward a brand of the Romanian software retailers.

The paper aims at revealing if the software vendors from different parts of the country are influenced by marketing campaigns which involve marketing strategies

such as: promotional pricing, sales promotion or partner relationship management. This subject is approached mainly because of the changes that have occurred in the distribution channels of the international software manufacturers in Romania over the last years. In recent years, the reports of Revenue Architects (2012) show that with the increasing use of the Internet for eCommerce, many pundits have announced the death of the distribution channel for software. But now, more than ever, this channel serves an increasingly important role for the software industry, and, within just a few years, it will likely change more than any other channel in businesses globally.

It is very important now, more than ever, for marketers to better understand these changes and, most important, to understand their partners, the software retailers. Also in Romania, these changes have occurred and are affecting the distribution channels of international software manufactures.

Technology, software and IT industry in Romania has experienced significant growth in the last years. As Vuici (2012) presents, the total Romanian software and IT industry turnover exceeded EUR 9.2 billion in 2011.

## **2. Literature review**

The ideal way of measuring the impact of marketing programs is carrying out marketing experiments on territories or marketing segments homogeneous market segments. Today, many companies use different communication channels to send the desired message or their service offer to different groups to record the differences arising between them. (Kotler 2005: 110)

Information service and software marketing has similar but different aspects due to the so-called information economics. For example, to market a new software product, companies may provide customers with a test version having a three-month expiration date, a free version handling only a limited numbers of variables, or a guest account to use for a web-based system with limited functionalities. This study used a web-based system to evaluate the effects of system trial on consumers' beliefs and intentions regarding e-learning use. In particular, the following research questions guided the study: (1) Do the potential consumer groups with or without system trial experience have similar beliefs and use intentions regarding the software product? (2) Do the relationships between consumers' behavioral intentions to use an e-learning system and determinant factors differ for trial and non-trial groups? (Yao-kuei Lee, 2006: 222-244)

One of the largest experiments on the software product market was carried out in 1993, the year that, on the United States' market, agents of small software companies considered introducing a few independent variables in marketing campaigns, in order to test their impact upon the individual users' buying intent.

Therefor they introduced the following new elements in the marketing campaigns: author rights for software products were included in contracts, as well as author rights for books and media, very popular books among the young population were introduced in applications as interactive elements, educational television shows began presenting interactive computer games, the idea of nowadays artist in programming and web-design, etc. was promoted. This very high level experiment had the following effects: very good programmers succeeded to request higher tariffs for their services, the prices were maintained through increased production, programmers' agents obtained

a higher charge, the powerful expansion of using software products started to emerge. (Shea, 1983: 20)

Traditionally, marketers as agents of change attempt to find ways to influence consumers use or purchasing behavior. One of the employed methods is for consumers to experiment with the product on a limited basis and make evaluation before use or purchasing. For example, some of the common practices are: (1) giving out trial-size samples of consumer goods, (2) providing limited trial of durable goods, and (3) offering test-drive of the latest auto models. These practices are designed to make consumers aware of the new products and at the same time reduce the risk perceived by prospective buyers. (Yao-kuei Lee, 2006: 222-244)

The subjects were randomly chosen, not knowing the scenario they will take part in. The groups didn't communicate whatsoever and the scales used are the same as in the literature. (Youn, Kim, 2008:123-137, Quester, Lim, 2003: 22-38)

It must be noted that in a marketing experiment sources of internal or external validity can appear. (Aaker, Kumar, Day, 1998: 384)

### **3. Research methodology**

From the need to have control over various conditions, marketing experiments are difficult to carry out. Various companies, including those in the software domain developed testing markets. These are certain towns or geographic areas in which marketing experiments are implemented. These testing markets are selected because they reflect competitive characteristics and consumer characteristics that are important for the companies. (Burrow, 2011: 148)

The marketing experiment allows the organiser to control over some experiment factors and comparisons between groups that are exposed to different inputs. (Hoyle, Harris, et. al., 2002: 421)

Experiment is a research method by which the variation of one or more independent variables is operated by the researcher, after which its effect on the dependent variable is measured. (Cătoi, Bălan, 2002: 363)

The hypotheses from which this experiment started are as follows: the strategy of sales promotion has the highest influence on the purchase and resale intention of the software retailers, the strategy of promotional pricing has the biggest influence on the loyalty of the vendors and on the attitude towards a brand of the software retailers.

Microsoft is a relationship – motivated company. In the manner of the most loyal personnel, partners must work hard to demonstrate their loyalty, which is rewarded. (Dinsmore & O'Conner, 2005:73)

To confirm or infirm these assumptions, the authors have introduced three stimuli which refer to the Microsoft Certified Partner Program and marketing strategies of the company. The companies that took part at this experiment are all members of this program, but none of them has any Microsoft competences.

#### **3.1. Defining the community, the unit of observation and sample characteristics**

The researched community consists of 45 software retailers from the main important cities of Romania. The observation unit is represented by the company that sales software products and services on the local market, and the experiment includes only experimental units. For the experiment, the representatives (managers and so on) of the following retailers were interviewed: Unitech 3-Alba; Contact Infonet AG-

Argeş; Cybernet-Bacău; One IT, MultiNET-Baia Mare; Short Cut Computers 1, B2B Digital, Trendex Electronics, Zolitrone IT Solutions-Braşov; Short Cut Computers 2, Soft Expert, Multi Data Soft, Omni Tech, Convex Network, Everest Computers, Tech PC Data-Bucharest; Centrul de Calculatoare 3-Caransebeş; Centrul de Calculatoare 1-Caraş Severin, Intend Computer-Cluj Napoca; Intercriş, MicroNet Systems, Silva Systems, Top Systems-Constanţa; Centrul de Calculatoare 2-Covadar; Angelosoft Computers-Craiova; Unitech 6-Deva; Simms Computer Center-Galaţi; Unitech 5-Hunedoara; Avicena Computers, IQ Plus-Iaşi; Aibox Consult-Oradea; Unitech 2-Petroşani; Compware Systems-Râmnicu Vâlcea; Nolimits Technologies, Gerodar-Satu Mare; Unitech 1-Sebeş; Pro Info-Sfântu Gheorghe; Open Systems-Suceava; Unitech 4-Târgu Jiu; Digimax, Caro Comp-Târgu Mureş; Saratoga, M&M Medianet, Com Stas Computer-Timişoara.

### 3.2. Tools used for data collection and the accuracy of the scales

Collection of the data was made by using 4 questionnaires as follows:

- Questionnaire number 1 - before testing – all respondents answered - serves to highlight the structure of the sample and the homogeneity of testing units from each group. It contains questions regarding the trade of Microsoft software products, questions regarding the attitude of software retailers towards Microsoft brand, the loyalty of the retailers and also questions regarding the purchase and resale intention of these companies;
- Questionnaire number 2 - after testing for the first group (15 respondents) – partner relationship management strategy – the scenario used was: “Free access to Pinpoint Platform and to Silver Small Business Competences (Get the first Silver Small Business Competence by obtaining a minimum number of 150 unique visitors in the first month on the Pinpoint Platform through your new account that you can create free of charge in the next three months)”. The questionnaire contains topics such as the attitude towards Microsoft brand, purchase and resale intention but also questions regarding the option and view of the software retailers on the marketing campaign to which they were exposed and the other two campaigns;
- Questionnaire number 3 – after-testing for second group (15 respondents) – sales promotion by encouraging sales force strategy - scenario used was: “Participate, by purchasing minimum 150 Microsoft Windows 8 licences, to a 3-day training program in Bucharest, were your employees will be trained in the trading techniques of the new Microsoft product, the operating system Windows 8”. Contains the same batch of questions as questionnaire 2;
- Questionnaire number 4 – After-testing for third group (15 respondents) – promotional pricing strategy –scenario used was: “Get the first Silver Small Business Competence with a charge of only EUR. 300”. Contains the same batch of questions as questionnaire 2.

Accuracy of the scales used in the experiment (Likert with 5 levels) was rendered through the results of the Cronbach’s Alpha index test, the value of this test for each variable being greater than 0.60.

To highlight the stages and the process of the experiment, the following notations are used: (See Table 1)

**Table 1:** The notations used for the experimental research

<b>X</b>	The manipulated independent variable	X <sub>1</sub> , X <sub>2</sub> , X <sub>3</sub> - the independent variables used
<b>Y<sub>a</sub></b>	The dependent variable measured before the independent variable is manipulated, controlled or measured	Y1a, Y2a, Y3a - the dependent variables before exposure to experimental stimulus
<b>Y<sub>b</sub></b>	The dependent variable measured after the independent variable is manipulated, controlled or measured	Y1b, Y2b, Y3b - the dependent variables after exposure to experimental stimulus
<b>R</b>	The three random samples	R1, R2, R3 - random samples

The representatives of all three samples were asked to answer to the first questionnaire and after that, to the questionnaires that included the stimuli used in the experiment.

#### 4. Research findings

Regarding the impact of the proposed stimuli on the purchase and resale intention of the software retailers, the promotion of sales has the most important influence by encouraging the sales force strategy. Next, the values recorded before and after exposure to stimuli for the means and standard deviations of the variable used to define purchase and resale intention of the retailers are presented (See Table 2):

**Table 2:** Means and standard deviations before-testing and after-testing for the variable “purchase and resale intention”

Observed groups	Before-testing		After-testing		No.
	Mean	Std.Dv.	Mean	Std.Dv.	
Partner relationship management strategy	3,533	1,06	4,000	0,75	15
Promoting sales trough the stimulation of the work force	3,133	1,24	4,266	0,79	15
Promotional pricing policy	3,133	1,06	4,133	0,74	15

After the introduction of the manipulation, the dimension of the purchase and resale intention changed as follows: increased in the case of partner relationship management strategy, from a mean of 3.5333 to one of 4.000 (on a scale from 1 to 5), in case of promotion of sales by encouraging the sales force the variables' mean came from a value of 3.1333 to a value of 4.2666 and in the case of promotional pricing, the value of the variables' mean increased from 3.133 to 4.1333.

To see if the differences recorded for the values of the analysed variable for each group are significant, a T Paired test was applied and the results are shown in Tables 3 and 4:

**Table 3:** Paired Samples Statistics for the variable “purchase and resale intention”

Variable used to illustrate the purchase and resale intention of the software retailers	Mean	No.	Std. Deviation	Std. Error Mean
Among providers, we grant greater importance to Microsoft distributors post-testing	4,1333	45	,75679	,11282
<b>Pair1</b>				
Among providers, we grant greater importance to Microsoft distributors pre-testing	3,2667	45	1,11600	,16636

As can be seen bellow, from the test conducted, the probability, 0.00015 is less than the significance level of 0.05. So, the null hypothesis is rejected and the outcome is statistically significant. There are significant differences between the means and standard deviations before exposure to experimental stimuli and after exposure for this variable.

From the above data it can be seen that after exposure to stimuli, the mean for the analysed variable is higher for the group exposed to sales promotion policy (4.2666) compared to the values of the variable in case of the other two groups exposed (4000 and 4133).

**Table 4:** Paired samples Test for: “Among providers, we grant greater importance to Microsoft distributors”

Variable used to illustrate the purchase and resale intention of the software retailers	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Among providers, we grant greater importance to Microsoft distributors before-testing / Among providers, we grant greater importance to Microsoft distributors after-testing	,86667	1,40777	,20986	,4437	1,2896	4,13	44	,00015

To see if the differences between the three observed groups are significant, One Way ANOVA test is used (See table 5):

**Table 5:** One way ANOVA Test for: Among providers, we grant greater importance to Microsoft distributors

	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Between Groups	3,378	2	1,689	3,500	,039
Within Groups	20,267	42	,483		
Total	23,644	44			

The results of the ANOVA Test shows that the alternative hypotheses is accepted and that there are significant differences between the three observed groups after exposer to stimuli (Sig. = 0.039 < 0,05).

The research findings show that the impact of the promotion of sales strategy is higher than the impact of partner relationship management strategy or the impact of the promotional pricing strategy on the observation units.

Next, the results show how the promotional pricing strategy influences the dimension of software retailers' loyalty and in what measure this differs from the impact had by the other two stimuli over the observation units of the experiment.

As it can be seen in Table 6, after the exposer to stimuli, the dimensions of the retailers loyalty changed: for the group exposed to the promotional pricing strategy the mean of the analysed variable increased to 4.800, for the group exposed to the partner relationship management policy the value of the mean reached the value of 4.866 and for the group exposed to the promotion of sales, the value of the mean reached 4.8000. The most significant difference is recorded for the observed group exposed to the promotional pricing strategy.

**Table 6:** Means and standard deviations before-testing and after-testing for the variable "loyalty"

<b>Observed groups</b>	<b>Before-testing</b>		<b>After-testing</b>		<b>No.</b>
	<b>Mean</b>	<b>Std.Dv.</b>	<b>Mean</b>	<b>Std.Dv.</b>	
Partner relationship management strategy	4,800	0,41	4,866	0,35	15
Promoting sales trough the stimulation of the work force	4,533	0,51	4,800	0,41	15
Promotional pricing policy	4,466	0,51	4,800	0,41	15

To see if the differences recorded for the values of the analysed variable for each group are significant, a T Paired test was applied and the values obtained are shown in Table 7.

The results from the conducted test show that the probability, 0.017 is less than the significance level of 0.05. So, the null hypothesis is rejected and the outcome is statistically significant. There are significant differences between the means and

standard deviations before exposure to experimental stimuli and after exposure for this variable.

**Table 7:** Paired samples Test for: “We choose the brand Microsoft when we want to sell operating systems or office suites”

The tested variable	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 We choose the brand Microsoft when we want to sell operating systems or office suites before-testing/ We choose the Microsoft brand when we want to sell operating systems or office suites after-testing	2,2222	,59882	,08927	,0423	,40213	2,489	44	,017

To see if the differences between the three observed groups, after exposure to stimuli, are significant, One Way ANOVA test is used (See table 8):

**Table 8:** One way ANOVA test for: “We choose the brand Microsoft when we want to sell operating systems or office suites”

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3,244	2	1,622	4,522	,017
Within Groups	15,067	42	,359		
Total	18,311	44			

The results of the ANOVA Test show that the alternative hypotheses is accepted and that there are significant differences between the three observed groups after exposure to stimuli (Sig. = 0.017 < 0,05).

The research findings show that the impact of the promotional pricing strategy over the dimension of the retailers’ loyalty is higher than the impact of partner relationship management strategy or the impact of the promotion of sales by encouraging the sales force strategy over the same dimension.

When it comes to the dimension of the attitude of the software retailers towards the Microsoft brand, the results of the analyse show that the differences, after the exposure to stimuli, between the three groups are not significant.

All three types of strategies have a positive influence over the attitude towards of a brand, but it can’t be said which of the stimuli has a greater influence on the

dimension of this variable. Instead, the promotional pricing strategy has the greatest influence over the retailers' orientation to a brand.

The differences between the observed groups, after the stimuli were introduced, are not significant and the One way ANOVA test confirms this hypotheses. The results of the one way ANOVA test are shown below, in table number 9.

**Table 9:** One way ANOVA test for: We recommend our clients Microsoft products

	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Between Groups	,133	2	,067	,396	,675
Within Groups	7,067	42	,168		
Total	7.200	44			

Of the three proposed strategies, the one that the software retailers were most receptive was the one of promotional pricing (See Table 10). After the manipulations were introduced, it can be seen that the mean for the group exposed to the promotional pricing strategy has a higher value (4.200) then the values recorded for the means of group exposed to partner relationship management strategy (4.133) and of group exposed to promotion through sales (4.066).

**Table 10:** Means and standard deviations after-testing: "attitude towards the brand"

<b>Observed groups</b>	<b>After-testing</b>		
	Mean	Std.Dv.	No.
Partner relationship management strategy	4,133	0,35	15
Promoting sales trough the stimulation of the work force	4,066	0,96	15
Promotional pricing policy	4,200	0,67	15

The One way ANOVA test results confirm that the difference between the values obtain for the analysed groups after exposure to the stimuli are significant (Sig. = 0,026 < 0,05) and that the highest receptivity of the software vendors is recorded for the promotional pricing strategy (See Table 11).

**Table 11:** One way ANOVA test for: "attitude towards the brand"

	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Between Groups	3,244	2	1,622	3,992	,026
Within Groups	17,067	42	,406		
Total	20,311	44			

After exposure to stimuli, all observation units were asked to give their opinion regarding the three marketing strategies proposed. 20 of the 45 representatives of the observation units have opted for promotional pricing strategy. Only 13 chosen the partner relationship management policy and 12 opted for sales promotion strategy.

## 5. Conclusions

After analysing the results we can conclude that the policy with the greatest influence of all 3 stimuli policies proposed (partner relationship management strategy; promoting sales through the stimulation of the work force; promotional pricing policy), was the promotional pricing policy, followed by the promoting sales strategy. The last, with the weakest influence was the partner relationship management strategy. Confirming the analysed hypothesis, the impact of the promotional pricing is more powerful regarding the retailers' loyalty in comparison with the impact that partnership relationship management and promoting sales had on the analysed variable. Loyalty in commercialising software products is a factor of great importance. This factor and the retailers' attitude towards different national and international software brands are strongly influenced by the promotional prices.

Regarding which of the marketing campaigns proposed in the experiment is the software retailers' favorite one, the results show that vendors are more receptive to the campaign that involves promotional pricing strategies.

The findings of this marketing experimental research represent a solid base for further research that can help the software products and services producers approach in a different and more constructive manner their relationship with their retailers.

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## FACTORS RESPONSIBLE FOR CONSUMER'S ATTITUDE TOWARDS ADVERGAMES

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**Abstract:** *Internet technology, as well as development of mobile phone was fast adopted by people for recreational, economical and business reasons. The web-based technology development and the new communication systems made marketers to orientate their promotional campaigns and efforts towards new ways of reaching their actual and potential client. They started to use new and innovative ways to get public's interest and to encourage purchase. In this context, Internet offered a complex environment to support the development of innovative brand strategies. One of the emerging new techniques in advertising is advergaming. Advergaming represent the use of video game interactive technology for delivering brand messages to public. They are electronic games accessible on companies own websites, on social media sites and on application which can be downloaded on mobile devices. For marketers is important to understand the way that advergaming work and what consumer's attitude towards this practice is. The formation of attitude depends on a series of factors which are common to all types of advertisements based on Internet technology. These factors responsible for consumers' attitude towards online advertising and implicit for attitude formation over advergaming are informative component, source credibility, entertainment, and irritation. Beside these four elements, there are additional criterions which consumers use for evaluating advertising in video games: the viral component, interactivity and telepresence. For marketers it is important to understand these factors and to find practical ways for using them for a better brand communication and for higher results of advertising campaigns which include the use of advergaming as part of the promotional strategy. The present paper is looking to make a description of the factors influencing consumer's attitude formation towards advergaming, in conjunction with the Internet environment and the specific features of this media channel. The presentation of the relevant factors is based on the fundamental elements defining consumer's attitude and it's particularities in online environment.*

**Keywords:** consumer's attitude, video games, advertising, advergaming, online

**JEL Classification:** M37

## **1. Introduction**

Today advertising is a complex business and with the improvement of Internet technology, the environment and landscape of business changed very much from what was like in the past. New techniques in communication and public targeting include studies for understanding consumers' behavioral characteristics and to help satisfying their needs. Among these studies, consumer's attitude has an important role.

More scholars and researchers become interested in understanding consumers set of actions, and become an aspect very large studied including development of efficient strategies used in influencing decisions made by consumers (Blackwell et al, 2001).

The Internet proved to be a good alternative to traditional media like television, radio and magazines for promoting products and services. The continuous increase of web traffic made advertisers orientate their advertising campaigns to online environment, and determined researchers to intensively investigate the online potential, for understanding and better use of the advantages offered by the Internet. Internet technology, as well as development of mobile phone was fast adopted by people for recreational, economical and business reasons. The latest models of communication offered companies new ways of reaching their clients and provided new ways for promoting their brands and products (Pelău and Zegreanu, 2010). The new online techniques received higher attention from the public, determining the change of the new media consumption patterns and making people to orientate to online environments (Drury, 2008).

Online advertising includes several forms, which could be understood in bigger classes as e-mail advertising, text, display advertising and online video advertising (Varnali, 2012). Among the last category, advergaming started to be a common practice in the new marketing context.

Advergaming represent the use of gaming interactive technology for delivering brand advertising messages to public. Advergaming is a technique of incorporating brands and product directly into the game environment. They are electronic games accessible on companies own websites, on social media sites and on application which can be downloaded on mobile devices. Some authors consider that under the generic name of advergence are "commercial messages embedded within the content of retail, accessible video games, online electronic games or apps" (Dahl et al, 2009). Advergaming are an efficient medium connected to Internet offering telepresence, immersion, accessibility and replaying ability.

## **2. Elements defining consumers' attitude**

Consumers' attitudinal structures were found to be similar both for traditional and Internet based advertising (Schlosser et al., 1999). The consistency of this structure is in accordance with other findings regarding the resemblance between traditional and Internet advertising with respect to entertainment and information value perceived by consumers. The studies about consumers' perception over advertising showed that factors specific for traditional media are also relevant for web based advertising (Chen and Wells, 1999).

Attitude can be defined as an emotional, rational and mental predisposition regarding a person, an object or a fact. In marketing, consumers' attitude studies are a part of

behavioral studies and imply the definition of reactions towards important attributes of brands, products, services and markets.

In literature, attitude was defined as “a learned predisposition of human beings” (Fishbein, 1967) or a “predisposition to respond in a favorable or unfavorable manner to a particular advertising stimulus during a particular exposure occasion” (Lutz, 1985).

More recent definitions considered attitude as a person’s position of being favorable or unfavorable, positive or negative, for or against a particular object (Loudon and Della Bitta, 1993). Kotler (2000) defined attitude based on the concept of human learned disposition. He developed this concept and considered attitude as being an expression of the individual personal evolution, an action tendency and an emotional feeling towards some objects or ideas. Some authors (Solomon et al, 2002) state that attitude is a long-lasting and common assessment of people, towards objects, oneself, other people, advertisement and any given problem. Other authors considered attitude as a predisposition to behave in a consistently favorable or unfavorable way with respect to a given object or a constant tendency to behave accordingly in a concrete situation, regarding a certain object or a group of objects (Schiffman and Kanuk, 2004).

The formation of attitude depends on a series of factors: knowledge, learning, information, education, thinking, experience, lifestyle, predisposition, belief, faith or communication. It could generally be translated in good or bad, positive or negative, optimistic or pessimistic, friendly or unfriendly. Attitudes could be consistent, could change due to external factors, could be influenced by some contextual elements, or could influence attitude of other persons.

Summarizing, attitude can be understood as a particular system of motivations, emotions, perceptual and cognitional processes, responding to certain environmental aspects, surrounding an individual.

Consumers’ attitude is a composite of consumers’ beliefs, feelings and behavioral intentions towards a certain brand, product or service. A consumer might have positive or negative beliefs about an object, as well as he could be neutral, depending on the context or the person. In some situations, the same person could have contradictory beliefs about a brand, being also positive about it in some situations, and negative in other situations. Starting from these beliefs, a consumer could develop certain feelings towards a brand or product. In accordance with these feelings, a consumer will manifest behavioral intention directed to a specific brand.

### **3. Elements specific for online advertising which influence consumers’ attitude over advergames**

Literature about advertising considers that there are several factors which are responsible for consumers’ attitude towards online advertising: informative component, source credibility, entertainment and irritation. Beside these four elements, there are additional criterions that consumers use when they evaluate advertising from video games: the viral component, interactivity and telepresence. Literature (Ducoffe, 1995; 1996) confirmed that attitude towards online advertisement is dependent on the perceived value of advertisement and the level of entertainment, information and intrusiveness. The author also described that these three factors determine consumers’ evaluation of the ad and the attitude towards it.

Researchers tried to explain the relation between the level of advertising persuasion and the consumer's reaction towards it, founding that this is directly related to consumer's preference for advertising in general, values of enjoyment and entertainment, the informational content value, the perception about the credibility and truthfulness of the source (James and Kover, 1992; Mehta, 2000).

### **3.1 The informative component**

Informative component of an advert refers to the quantity and quality of data relevant for the brand or product, which describes its particularities, properties, special characteristics and the way it could be used. This component has impact on consumers as it helps them in decision making process and purchase (Tsang et al., 2004). This factor is also important for determining the efficiency of an advertisement. It helps in making consumers be aware of a product, and informs them about the features that make it better and more attractive than competitors' offers (Saadeghvaziri and Hosseini, 2011).

Advergaming can incorporate interactive branded objects which can help users to understand the particular characteristics and the usage of a product or service during a game session. From this perspective, the information provided through an advergame can be more complete and relevant for consumers than watching a TV commercial or seeing an online banner.

The specific structure of a video game encourages players to repeat the game experience by replaying the game. This fact leads to minimal risk of forgetting the information and message about the products advertised in the game. From the cognitive perspective, replaying the game helps in bringing the brand or product in the preference set of the consumer and may increase loyalty.

### **3.2 Source credibility**

Some authors (Ducoffe, 1996) consider that the attitude towards an advertisement can be related to the attitude towards the environment that contains it and the consumers' perceived value of that advertising. As an example, authors said that adverts placed in a medium like newspapers are more trusted and perceived as more credible and informative, than those placed in a medium as television, considered less informative and reliable, (Bauer and Greyser, 1968; Becker et al., 1976; Larkin, 1979). For web-based advertisement, this means that a consumer may accept the web as a tool with multi-functional characteristics, but could have a different attitude towards the advertising in this medium.

There are multiple factors that influence the credibility of an advertisement, like the general credibility of the brand and company, as well as the context and the channels used for transmitting the brand message to public. Authors think that a higher credibility of the source leads to a higher value of the advertisements and higher impact of the message over consumers (Haghirian et al. 2005).

The original purpose of video games was to entertain and relax the public, and put them in a position less credible. Today instead, video games can be used for practical purposes, as they could employ practical benefits to their purpose of recreation. Compared to classic video games, there are new categories of games named serious games, which include, beside their basic purpose, a utilitarian purpose. These categories of video games include: educational games, training games, simulation games and advertising games. In other words, serious games are

characterized by a utilitarian and educational scenario, which exist in a combination with the entertainment scenario.

Serious games created for advertising, like advergames, have the purpose of promoting particular brands or products during game sessions. This approach differentiates advergames from normal video games, and can be perceived as more credible by consumers.

### **3.3 Entertainment**

The feelings of enjoyment connected to advertisement have an important role in determining consumers' attitude towards online adverts. It is considered that entertainment services brings an additional value for consumers and could lead to an increased loyalty, as well as a positive attitude (Saadeghvaziri and Hosseini, 2011). For online advertising, entertainment component helps in predicting online advertisements efficiency and is an important factor which determines the positive attitude in web based and mobile advertisements (Tsang et al., 2004; Bauer et al., 2005). These facts have great importance for advergames, which are design both for computer and mobile phones.

One of the most important features of advergames is the entertainment value offered. This can block the natural forgetfulness of a brand experience specific to advertisements. Players can see the billboard, the interactive branded objects or characters from the game while they play and reach game goals.

In today market, when audiences get easily distracted, loose interest, show indifference and are difficult to captivate, combining entertaining with advertising features seems to be an effective practice. While other Medias as television seem to fail in retaining publics' attention, advergames are a good way to gain consumer's interest and awareness.

Several authors consider that advergames are a unique way of branded entertainment because it is produced for a specific sponsoring brand and contains promotional messages directed towards the same product. Compared to other forms of advertising like product placements and insertions, the entire game is in fact a brand message (Chen and Ringel, 2001; Deal, 2005).

The possibility of creating advertising with entertaining content using an advergame is a form of branded entertainment which incorporates in its essence a hybrid brand message. In this way, advergames allow marketers to have control over the context they deliver the entertaining message and provide a very high level of conducting promotional campaigns. It can present a brand's message "in an engaging manner at a fraction of the cost of television advertising" (Bertrim, 2005). It can be said that advergames are a direct form of branded entertainment delivered more efficiently than other advertising methods.

The most recent study on this matter (Marti-Parreño et al., 2013) investigated if the entertainment of an advergame has positive influence over consumer's attitude towards a brand integrated in the advergame. For the investigation, the authors applied a questioner with 19 items to a sample of 100 students from a University in Spain. The answers were designed on a seven-point Likert scale, ranked from "strongly disagree" to "strongly agree".

The result showed that attitude towards advergames is positive connected to the consumers feeling of being entertained by the advergame. These findings also supported previous research, showing that attitude towards advertising follows

similar rules for advergaming as for other media as web-based technology (Lou, 2002; Chen and Wells, 1999), advertising in general (Ducoffe, 1996) and online computer games (Gao, 2004).

### **3.4 Irritation**

Many advertisers adopted intrusive tactics for getting consumers' interest and attention, but most of the time these tactics are perceived as being annoying (Zhang, 2000). Numerous studies revealed a negative attitude of consumers regarding advertising (Alwitt and Prabhaker, 1994). Authors (Ducoffe, 1996) pointed out that in the moment of exposure most of the messages are not related to consumers' immediate interests and needs. Therefore, they dismiss these messages. These facts made advertisers find new strategies that could help in reaching the targeted public, as well as adapting old practices used in traditional environments as television and billboards to interactive media as Internet.

When consumers face invasive and repetitive advertisements tend to react with negative feelings as irritation and annoyance. Compared to other media, advergaming are more consumer' friendly because advertisements are exposed in the background during certain games, a practice that is more accepted by consumers (Ipe, 2008). Authors (Kretchmer, 2004) think that advergaming are more effective than online banners because of the "growing cynicism about banner advertisements" while in advergaming the product is present in the background or as part of a character of the interactive game.

The same study mentioned above (Marti-Parreño et al., 2013) also investigated the connection between attitude towards advergaming and consumers irritation. Authors pointed out that irritation is a sensation produced by the brand abusive appearance in the advergaming content, which could trigger anxiety, poor game experience and disrupt player's attention from the game play. The study showed that if the presence of the brand is too intrusive and unsuitable or the role of the brand in the game is not justified by the game action, the attitude towards that brand will become negative. These facts support Gao's (2004) findings that "the design of a game that annoys, offends or insults the intelligence of the audience can cause irritation and can negatively affect attitude toward the brand".

## **4. Particular elements which influence consumers' attitude towards advergaming**

### **4.1 The viral component**

Many brands started to use viral marketing for promotional purposes, determining in this way an increased popularity of this method (Eckler and Bolls, 2011). Compared to conventional media, this method helps to better target people and to deliver personalized messages. It also offers potential for quantify the speed of message transmission and the consumers' reaction and response (Bampo et al., 2008).

A good impression and a positive attitude towards an advergaming will reflect in a positive evaluation of the brand or product advertised in the game. The repetitive nature of the game produces a higher remembering rate as the frequency will influence the chance of retaining the players' attention with the brand exposure and message deliverance.

Advergaming can be used as a viral marketing tool, their structure permitting players to share the game experience and talk about them with friends and family. Advergaming has a “tell-a-friend” viral component making players be more engaged with the game and more aware of the brand and product presented in the scenario. Besides remembering the brand, if the advergaming is popular and fun players will associate the game’s characteristics with the brand.

#### **4.2 Interactivity**

Traditional media is characterized by a one-way communication system which makes consumers to accept the message from the source without any possibility of control. Compared to this, advergaming allows people to voluntarily and constantly take action, by actively searching and choosing the game they want to play, to replay it and repeat the experience on the game and implicit with the product or service advertised within. Consequently, the non-linear structure of the interactive advergaming influences consumers’ experience with the brand.

Interactivity is considered the possibility to modify the form and content of a mediated environment in real time (Steuer, 1992). It was also defined as “an expression of the extent that, in a given series of communication exchanges, any third transmission is related to the degree to which previous exchanges referred to even earlier transmissions” (Rafaeli, 1997)

When a consumer interacts with an advertisement, the relevance of the ad, the importance of information, and current needs will influence the consumers’ general involvement with the ad.

The structure of the interactivity on new media includes a dimension defined by Liu (2001) as active control, freedom of choice, two-way communication and synchronicity. Internet technology enhances consumer’s interactive experience, allowing them more freedom in choosing the type of information they search and the moment when to receive it. The interactive communication through advergaming eliminates physical, temporal and spatial barriers in a way that traditional media is unable to do.

For video games, telepresence is a dimension given by interactivity and vividness of the virtual environment. Telepresence refers to consumers feeling of being mediated in the virtual environment. Players’ sensation of being present in the video game world is enhanced by the number of senses that are incorporated within the game, including visual and audio effects, and leads to a higher level of telepresence. Authors (Cook and Coupey, 1998) explained that environments with video, text and sound elements offer a good context for decision making, increasing consumers experience with the promoted brand. From an advergaming perspective, telepresence is important only if it helps the consumer to get involved in the game and to feel immersed in the virtual environment.

Vividness is considered to be the richness of the virtual environment and it depends on the game’s technical characteristics. Authors (Steuer 1992) first described the factors that best describe vividness as depending on the number of sensory dimensions presented in the game and the depth of these sensors, including visual and audio as the most important sensors.

An important study on interactivity and its most relevant attribute, telepresence, was conducted in 2010. The authors (Hussein et al., 2010) investigated the way that

video games which created the feeling of telepresence and the way that interactivity created product experience affected consumers' purchase intention.

The study was conducted over a sample of 250 undergraduate students from University Sains Malaysia who volunteered for the laboratory research. The experiment was designed to ensure the cause and effect relation between persuasive actions of the video game and the respondent manifested intentions. The respondents answered immediately after a game session to a questionnaire structured in three main sections, designed for collecting demographic data, telepresence data and purchase intention data. The answers were designed on a five-point Likert scale.

The results indicated that the relation between experience with the product induced by telepresence and purchase intention is significant. This fact has proved that attitudes formed in a mediated environment influence the behavioral intention in the real world, as purchase.

Authors pointed out that telepresence offers important contribution to understanding the perception of product presented in mediated environment and the game player's way of understanding the product experience and the particular persuasive messages, concluding that telepresence is an important driver of players purchase intention.

## **5. Conclusions**

This study presents the basic elements that describe the formation of attitude based on consumer's experience with a video game containing advertising elements. The product experience can be mediated through an advergame where advertisers have the possibility to control players' perception through advertising actions.

Marketers who plan to use advergames as part of their promotional strategy have to first understand the players' preferences and expectation from a video game. They have to design a game content that will engage consumers and will create positive feelings towards the brand or product presented in that particular game. They should integrate the brand in a way that would not distract player from the game play and avoid in this way players' irritation. Also, it is important to create content by using symbols, objects, characters and messages that makes the game space environment more fun and attractive.

When a firm uses advergames it should be careful to produce creative content, to engage consumer in the virtual space of the game and to increase entertainment possibilities of the advergame. As game players are subjective, advertisers should give special attention to consumers' expectation and preference.

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# INCORPORATING MARKET ORIENTATION IN HIGHER EDUCATION INSTITUTIONS

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**Abstract:** *The purpose of this paper is to provide a review of the main issues surrounding the concept of market orientation applied in the context of higher education. Considering the important changes taking place in this sector, a strong willingness of universities to adopt marketing concepts can be noticed. The paper seeks to provide a retrospect on this process, starting with the incorporation of marketing in higher education, and moving on to its implementation, which has come to be known as market orientation. Following a stream of the most relevant literature in the field, we present definitions of the main concepts, and integrate them in the education context, with the purpose of establishing the relevance and importance of market orientation for achieving a sustainable competitive advantage and higher institutional performance. The paper does not aim at providing an exhaustive literature review, but rather at presenting the main elements that define a market orientation, and at supporting its implementation, by outlining the significant benefits that could follow. While theoretical by nature, this research contributes to the body of literature in the field, through closely examining the conceptualization and operationalization of market orientation, and also providing the fundamental components that define the concept and help its implementation. Furthermore, the paper provides practitioners with a number of suggested research directions, which could potentially help improve educational institutions' activity, while also contributing to a better understanding of the concept, and to building richer theories in the field of marketing education. Given that the marketing literature in Romania has mostly overlooked market orientation, both this paper, and all following research in this area will prove to be significant for education managers and researchers alike, promoting the importance and significance of relevant knowledge, and encouraging a wider acceptance of market orientation throughout the education sector.*

**Keywords:** education marketing; market orientation; higher education; customer orientation.

**JEL classification:** M31, I23

## 1. Introduction

Change is not a new word for higher education institutions or the academic environment. The higher education literature widely acknowledges the fact that universities today are faced with great challenges, and that their survival depends mostly on the way in which they choose to respond to environmental threats. Among these threats, competition between universities both for students, and for resources is believed to be one of the most important elements that led to a growing interest in marketing, and to a shift in the institutions' focus towards customers and the educational marketplace (Newman, 2002; Oplatka, Foskett and Hemsley-Brown,

2002; Flavián and Lozano, 2007). The initial reaction of universities to these changes was to adopt marketing theories and concepts which have been effective in the business world, with the scope of increasing institutional performance and gaining a competitive edge (Hemsley-Brown and Oplatka, 2006). The student – customer – became the focal point, followed by the development of a customer-driven organizational culture.

Today most higher education institutions commonly acknowledge the need for the use of marketing, in order to survive and continue to face the challenges in the academic environment. Consequently, research on education marketing has been receiving increasing attention in recent years (Oplatka and Hemsley-Brown, 2007). For more than a decade, a primary area of research has been the study of market orientation (Flavián and Lozano, 2006), as a way for institutions to improve the student-university relationship. Basically, this construct reflects the degree to which the marketing concept has been implemented within an organization (Hammond, Webster and Harmon, 2006). Market orientation is believed to be linked to the opportunity of creating sustainable superior value for customers, in this way leading to a competitive advantage, and to higher institutional performance (Kohli and Jaworski, 1990; Narver and Slater, 1990). However, as shown by Hammond, Webster and Harmon (2006), levels of market orientation and levels of management emphasis on market orientation are alarmingly low within higher education institutions. Also, in spite of the extensive interest in this concept throughout the literature, education marketing literature in Romania seems to have overlooked market orientation. With few exceptions that apply a market orientation perspective to a university setting (Platis, 2009; Pitic and Drăgan, 2010), research fails to address the concept in terms of construct or ways in which it can be applied successfully as a strategy for educational institutions.

The purpose of this paper is to provide a short literature review on market orientation, its emergence and development in higher education, and also on potential benefits that could be obtained by embracing the concept. We begin our discussion with the incorporation of marketing in the education sector, and then move on to show and how it came to be implemented within higher education institutions. In the final section we also suggest future directions for education practitioners to better understand the concept and the ways in which it can be implemented successfully.

## **2. Marketing in Higher Education**

Literature on higher education marketing can be found to be rather extensive, focusing on various items that define the concept, starting with the educational marketplace and customer needs (Teixeira, Rosa and Amaral, 2004; Brown and Scott, 2006), and moving on to specific topics, such as the marketing mix and educational marketing strategies (Cowburn, 2005; Ho and Hung, 2008; Ivy, 2008), and even to controversial discussions over the current marketization of universities or over the function that students hold within the educational process (Bok, 2003; Molesworth, Scullion and Nixon, 2011). Nevertheless, the emergence and development of educational marketing were somewhat defined by an unclear start, as the concept was initially regarded with suspicion and doubt, both by academics, and by universities' management. Marketing was believed to be synonymous with sales and promotion, and these concepts did not belong to the values fostered by

the educational system.

One of the first supporters of educational marketing was Krachenberg (1972), who argued that universities are involved in marketing actions, even if they do not officially admit it. Starting with student recruitment and tax policy making, and on to putting together a research proposal, every action that the university undertakes, no matter who actually performs it or where exactly in the institution it is being done, is grounded on marketing components (Krachenberg, 1972). Litten (1980) further supports this idea, and argues that “marketing is a frame of mind in which questions are asked about the optimum relationship between an organization and its environment, or parts of its environment, and action is taken that is informed by the answers to those questions” (Litten, 1980: 41). The author proceeds on defining this concept, and discusses various aspects, which are specific to higher education:

- Marketing involves conventional activities, such as advertising, as well as an array of other actions, which he adds up under the label “institutional presentation”;
- Information generation through marketing research holds a key role;
- Marketing is concerned with the development and delivery of educational and auxiliary services for which there is desire or need, at a price and under financial circumstances that would permit the intended beneficiaries to take advantage of the services;
- The responsible feature needs to be fully integrated within marketing, so that institutions become concerned with providing students with educational programs that are both beneficial and rewarding;
- The concepts of “market segmentation”, “targeting” and “positioning” are major functions of marketing and market research, and if applied properly, could significantly contribute to the achievement of institutional goals.

Progressively, marketing has become an instrumental managerial function to the survival of a university in an increasing competitive environment, given that it is no longer enough for a higher education institution to be effective, it needs to also have an effective image for parents and other stakeholders (Oplatka, Foskett and Hemsley-Brown, 2002). As Kotler, Kartajaya and Setiawan (2010) show, marketing has witnessed a transition from a product-centric vertical view (Marketing 1.0) to being consumer-centric (Marketing 2.0), and is now entering a new stage of “human-centricity” (Marketing 3.0), trying to reach all stakeholders, by cultivating the values they consider to be important, like public service or sustainability.

The higher education literature promotes marketing as “the body of theory that holds practical tools to help tertiary educational institutions survive and even thrive in competitive environments” (Stachowski, 2011). But to be successful in this endeavor, higher education institutions must first focus their interest on consumers and stakeholders, and their respective needs and wants. As Kotler and Fox (1995: 5-6) so eloquently state, “marketing exists when people decide to satisfy their needs and wants through exchange”. Therefore, the very first step that higher education institutions must undertake is to become customer oriented, and let marketing be the means to ensure the exchanges between the institution and its publics, in response to their corresponding needs and wants (Motekaitienė and Juščius, 2008). The next section discusses the concept of market orientation, its construct and benefits, and also provides universities with the existing ways in which they can measure the degree of market orientation within their institutions.

### **3. Market Orientation – The Construct**

Many managers today recognise that the ability to succeed in the marketplace requires more than just sales techniques (Hemsley-Brown and Oplatka, 2010). By incorporating marketing into the school culture, higher education institutions are looking out for clever ways to adapt to their competitive environment and to overcome the challenges that it may present. The notion of market orientation derives from the marketing concept (Hampton et. al., 2009) and is defined as the implementation of the marketing concept within an organization (Kohli and Jaworski, 1990). It is widely adopted throughout the education literature by many authors, along with the terms “marketing orientation” or “customer orientation” (Siu and Wilson, 1998), to emphasize the shift in the institutions’ focus towards delivering value to their many constituents.

Kohli and Jaworski (1990) show that there has been a transition from the concept of “marketing orientation” to the one of “market orientation”, the latter appearing to be preferable in most writings. Presumably, according to the authors, this has happened based on the fact that the term “market orientation” focuses attention on “markets”, incorporating all the parties involved, including (but not limited to) customers and the forces affecting them, at the same time suggesting that embracing a market orientation is not exclusively a concern of the marketing function, but of the entire organization.

The marketing literature is replete with definitions and perspectives of market orientation (Hemsley-Brown and Oplatka, 2010), the most frequently cited being the ones offered by Narver and Slater (1990) and Kohli and Jaworski (1990). According to the first two authors, “market orientation is the organization culture that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers, and, thus, continuous superior performance for the business” (Narver and Slater, 1990: 21). The authors believe that this concept consists of three behavioral components – customer orientation, competitor orientation, and inter-functional coordination, and two decision criteria – long-term focus and profitability. Kohli and Jaworski (1990) adopt an information-processing perspective (Ross, Grace and Shao, 2012), and argue that “market orientation is the organization-wide generation of marketing intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization-wide responsiveness to it” (Kohli and Jaworski, 1990: 6).

These original attitudes towards market orientation went on to be integrated within the literature, giving shape to two different, but at the same time complementary perspectives of the concept. As shown by Avlonitis and Gounaris (1999), and Flavián and Lozano (2006), market orientation is defined on one hand from a philosophical point of view, as an organization’s “attitude”, and on the other hand, as a specific “behavior” of the organization. The complementary nature of these two perspectives comes from understanding that unless an institution has developed a certain attitude, the strategies intended to maximize its adaptation to the market cannot be designed. Also, the strategies designed to increase the degree of the institution’s adaptation to the market cannot be implemented, unless the preoccupation to do so is appreciated (Avlonitis and Gounaris, 1999: 1006). Therefore, the market orientation of a higher education institution is presented as a convergence of marketing and strategic management thinking (Binsardi and

Ekwulugo, 2003). It is a process that implies the analysis of external influences (competitors), generation of relevant information, coordination of the activity of all departments, but also the construction of a strategic answer to market opportunities, all with the intent of satisfying customers through continuous needs-assessment (Oplatka and Hemsley-Brown, 2007).

In conformity with the principles of marketing, market orientation emphasizes customers' interests, and therefore, aims at directing all the institution's activities towards meeting customers' needs (Voon, 2008; Hemsley-Brown and Oplatka, 2010; Webster, Hammond and Rothwell, 2010), with the purpose of obtaining a competitive advantage, while also measuring the degree to which all this is being accomplished within the institution. However, there is more to market orientation than just customer orientation (Oplatka and Hemsley-Brown, 2007). It is grounded upon other specific components, as reflected in the original definitions of the concept.

Based on the arguments developed by Narver and Slater (1990), Modi and Mishra (2010) examined market orientation in the nonprofit sector and defined the concept as "the coordinated outward focus of an organization on its key stakeholders" (Modi and Mishra, 2010: 553), thus suggesting the need to expand an organization's actions towards other participants in the marketplace. According to the authors, the concept is grounded upon four equally important components, derived from the ones initially suggested by Narver and Slater (1990): beneficiary orientation, donor orientation, peer orientation and inter-functional coordination. Following this idea and focusing on higher education, Rivera-Camino and Molero Ayala (2010) show the need for a distinctive definition of this concept in the education sector, and focus on the employees' perspective. The authors consider market orientation to be "a competitive strategy or an organizational model, which is maintained by the recurring behavior of workers or routines" (Rivera-Camino and Molero Ayala, 2010: 127). Moreover, they expand the range of market orientation to include the following six components: student orientation, worker orientation, competitor orientation, company-donor orientation, environment orientation, and inter-functional coordination. Also considering higher education, Voon (2008) adopts a services perspective and offers a comprehensive definition of market orientation. Labeled "service-driven market orientation", it is defined as "the set of beliefs, behaviors, and cross-functional processes that seriously focuses on continuous and comprehensive understanding, disseminating, as well as satisfying the current and future needs of the target customers for service excellence" (Voon, 2008: 219).

Research on market orientation applied to higher education generally starts with the three components initially described by Narver and Slater (1990) – customer orientation, competition orientation and, respectively, inter-functional coordination. Some of the identified studies consider solely the above-mentioned components (Oplatka and Hemsley-Brown, 2007; Hemsley-Brown and Oplatka, 2010; Ross, Grace and Shao, 2012), while others seek to expand the domain of market orientation, to also include long-term orientation, performance orientation (Voon, 2008) and employee orientation (Siu and Wilson, 2008; Voon, 2008). While there is no general agreement throughout the literature about a single definition of market orientation or its usefulness and reliability (Rivera-Camino and Molero Ayala, 2010; Ross, Grace and Shao, 2012), studies overall admit that adopting a market orientation can offer a number of benefits for a higher education institution, and seek

to determine specific benefits, their antecedents or the existent link between the measured degree of market orientation and the possibility of achieving a competitive advantage.

### **3.1 Benefits of Implementing a Market Orientation**

One of the most important benefits that comes with embracing a market orientation in higher education institutions is actually the one most emphasized by both Narver and Slater (1990) and Kohli, Jaworski and Kumar (1993), and that is increased performance for the institution. Studies by Caruana, Ramaseshan and Ewing (1998a, 1998b) and Hammond, Webster and Harmon (2006) show that a university's performance is indeed impacted by the degree of market orientation implemented within the institution. Their studies also reveal that applying the concept is, to a large extent, contingent on universities' management (Hammond, Webster and Harmon, 2006), but also that a higher degree of market orientation is positively correlated with the institution's ability to obtain non-government funding (Caruana, Ramaseshan and Ewing, 1998a,b).

Webster, Harmon and Rothwell (2010) suggest other significant benefits that could follow the implementation of a market orientation, by focusing the institution's marketing efforts towards students or potential employers. Among these improvement opportunities, they mention a potential increase in the enrollment within the institution, an increase in the retention rate of current students, an increase in future involvement from the alumni or establishing more partnerships with the business community. Concentrating on academics, Flavián and Lozano (2007) further show that market orientation can have a positive impact on teaching and research activities, and also on university extension activities – dissemination of knowledge and culture. A higher degree of market orientation has also been linked to customer-perceived service quality, customer satisfaction and customer loyalty (Voon, 2008).

However, higher education institutions still show relatively low levels of market orientation and low levels of management emphasis on market orientation (Hammond, Webster and Harmon, 2006). Siu and Wilson (1998) argue for the important role that university management plays in creating a marketing organizational culture, and support a greater and more active involvement in implementing a market orientation. Higher education institutions should take advantage and fully embrace market orientation, as they could be presented with significant opportunities to improve their activity and increase their performance.

### **3.2 Measuring Market Orientation in Higher Education Institutions**

In the following, we seek to provide higher education institutions and their management with ways in which they can assess the existent degree of market orientation, as presented throughout the literature. By evaluating their current position, and knowing where they stand, they can take measures to improve specific components, and gain advantages in certain directions.

Research reviewed in this paper measures market orientation using the MKTOR (Narver and Slater, 1990) and MARKOR (Kohli, Jaworski and Kumar, 1993) scales, which are based on the components of market orientation identified by the authors. Correspondingly, MKTOR applies customer orientation, competitor orientation and inter-functional coordination, and MKTOR encloses information generation,

information dissemination and organizational responsiveness. Voon (2008) suggests a service perspective on the concept, and develops the SERVMO scale, to measure market orientation within higher education institutions. He builds his instrument on six components that define market orientation, respectively customer orientation, competitor orientation, inter-functional coordination, performance orientation, long-term orientation and employee orientation. Furthermore, the author strongly emphasizes the importance of considering other dimensions of the concept than just customer orientation, arguing for the important function of competitor and employee orientation within institutions. Ross, Grace and Shao (2012) support the idea that customer orientation does not always appear to be the most significant component of market orientation. Focusing on international recruitment departments, the authors note that their performance is mostly influenced by inter-functional orientation, which could significantly enhance the outcomes, if implemented properly.

#### **4. Discussion and Future Research**

The purpose of this paper was to highlight the importance of market orientation for educational institutions, by reviewing the most relevant literature in the field, and also to make a contribution to the marketing literature in Romania, by bringing forward the concept of market orientation applied to higher education, and pointing out a number of potential future research areas.

While research on market orientation applied to higher education in Romania is still developing, the international studies reviewed thus far show significant opportunities for educational institutions to improve their activity and performance by embracing this concept. Throughout this paper, the authors have shown that great benefits could be obtained by incorporating and implementing a market orientation in the university setting, and therefore argue for a greater attention paid to this concept. Higher education managers must accept that this can indeed turn out to be a time-consuming process (Siu and Wilson, 1998), and be open to dedicate their time and allocate resources in this direction. Identifying their publics' needs is a significant first step for any higher education institution, followed by precise measures and actions that will lead to satisfying the identified needs. Meeting students' expectations, together with a student-centered approach can become part of the institutional mission (Hemsley-Brown and Oplatka, 2010), while communicating the institution's identity, its purpose and priorities to all stakeholders. The final objective should be the implementation of a marketing organizational culture within the institution, through engaged employees, through carefully analyzing environmental trends, and implementing coherent strategies, based on the fundamental principles of marketing. Considering the great impact and potential benefits that a market orientation could offer to higher education institutions, we argue for a better understanding of the concept in this sector. Future studies could focus on establishing the dominant components of market orientation or identifying new dimensions of the concept and their antecedents. We support the authors who looked beyond customer orientation as the major component of market orientation, and agree that in order to be completely market oriented, it is imperative to examine the entire educational marketplace. In this sense, we agree with Akonkwa (2009) who suggests operationalizing the "stakeholder orientation" concept, in place of customer orientation.

Furthermore, given that market orientation is closely linked to institutional performance and strategy, being considered “the heart of modern marketing management and strategy” (Narver and Slater, 1990: 20), we believe it could be useful to analyze the relationships between these concepts, and how they influence one another. Research could focus on what components of market orientation most influence institutional performance or the implementation of strategy, and ultimately develop a model for a better understanding of these relationships.

There are many other topics that could be explored in connection to market orientation, including the internal environment, service quality matters, funding issues, competition etc. Each of these topics could add great value to both higher education theory and practice, and therefore, they should not be disregarded by future studies.

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## **FACTORS INFLUENCING CUSTOMERS' BEHAVIOUR TOWARDS TRUSTED SERVICE PROVIDERS: AN INVESTIGATION OF FOUR SERVICE SETTINGS**

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**Abstract:** *Many researchers have outlined the specific importance of trust for service provider firms, on one hand, because the intangible nature of services increases the risk and the uncertainty of the buyer's selection process; on the other hand, because trust can represent the basis for the development of long-term, mutually beneficial, relationships between the service provider and the customer. From this perspective, a good understanding of the effect of trust on customer loyalty becomes paramount for designing and implementing effective marketing procedures, and for accurately predicting business results. The trust-loyalty link is, however, difficult to predict and explain, because of the multitude of factors that can influence consumer behaviour. This study attempts to analyse the relation between trust and customer loyalty in different service settings, and to identify the factors that can influence customers' behaviour towards trusted service providers. To answer the formulated research objectives, a combination of secondary and primary sources have been used to collect relevant data. In the first stage of the research process an extensive literature review was realised in order to identify and evaluate the existing theories regarding customer trust and its effect on customer loyalty, especially in the area of services. In the second stage of the research process, the research framework was refined, verified and validated through 5 face-to-face interviews realised with randomly selected people. The interviews lasted between 30 and 45 minutes and took place in the waiting area of one major supermarket, located in Edinburgh, Scotland. These interviews indicated the need to study the relation between trust and customer loyalty in various service settings, as well as helping to define the major elements that influence this relation at individual level. In the third stage of the research process, a total of 412 face-to-face interviews have been realised. These interviews lasted around 15-20 minutes, and the respondents being randomly selected from the waiting areas of five UK supermarkets. The collected data has been analysed with the SPSS software, using the Chi Square and Pearson's two-tailed correlation tests. The results indicate a complex relationship between various categories of factors and the level of customer loyalty, which varies in relation to specific service settings. The findings have been integrated into a synthetic model, developed for four different types of services.*

**Keywords:** *trust-loyalty relation, customer behaviour, influencing factors, different service contexts*

**JEL classification:** M31

## **1. Introduction**

The intense competition in most areas of business activity has refocused the attention of researchers and practitioners on the concept of consumer trust. Trust represents a very complex phenomenon, which has been defined and interpreted from many various, and sometimes even contradictory, perspectives (Raimondi, 2000).

Many researchers have outlined the specific importance of trust for service provider firms, on one hand, because the intangible nature of services increases the risk and the uncertainty of the buyer's selection process; on the other hand, because trust can represent the basis for the development of long-term, mutually beneficial, relationships between the service provider and the customer (Mittal and Lassar, 1998; Ranaweera and Prabhu, 2003). From this perspective, a good understanding of the effect of trust on customer loyalty becomes paramount for designing and implementing effective marketing procedures, and for accurately predicting business results. The trust-loyalty link is, however, difficult to predict and explain, because of the multitude of factors that can influence consumer behaviour (Bendapudi and Berry, 1997).

This study attempts to analyse the relation between trust and customer loyalty in different service settings, and to identify the factors that can influence customers' behaviour towards trusted service providers. The research framework has been organised around three main research objectives:

1. To analyse the relation between trust and customer loyalty in various types of service settings (low versus high risk services; continuous versus discrete service situations).
2. To identify the main factors that influence the relation between trust and customer loyalty (service-related, customer-related, interaction-related, and circumstantial factors).
3. To develop a synthetic model of customer loyalty towards trusted service providers in various service settings.

After a critical evaluation of the trust-loyalty related research, the paper presents the research methodology applied to collect, and analyse primary and secondary data. The interpretation of results is made in direct relation to the formulated research objectives, and a synthetic model of trust-loyalty relation is developed on the basis of analytical research findings. The paper concludes with a summary of the main findings and with suggestions for future research.

## **2. A review of trust-related research**

Both trust and loyalty represent the focus of extensive research and analysis in the academic and professional environments.

Trust represents a research topic that was studied by psychology, sociology, economy and management sciences (Castaldo, 2003; Raimondi, 2000). In marketing, the concept of trust is strongly connected with the theories of customer relationship management (Grönroos, 1996), the main research being focused on the determinants of trust formation and on the various aspects/levels of company-customer trust (Auh, 2005; Garbarino and Johnson, 1999; Morgan and Hunt, 1994; Sirdeshmukh et al., 2002).

For the purpose of this research project, the mechanism of trust formation and the determinants of trust were not considered as research objectives. Instead, the

investigation has focused on the behaviour of customers in relation to already trusted service providers, which were defined as service firms that simultaneously fulfil three conditions:

- customer trust is based on direct experience (the customer has previously bought, or is presently buying, services from this firm);
- customer trust is based on satisfaction and perceived reliability;
- the customer has a clear intention to continue the relation with the firm in the future, through exclusive or occasional service acquisitions.

These three inter-related elements have been identified by most researchers as determinants and effects that can effectively describe a company-customer trust situation.

The relation between customer trust and loyalty has been analysed in many academic and professional studies (Gremler and Brown, 1996; Ranaweera and Prabhu, 2003; Sirdeshmukh et al., 2002). The benefits of customer loyalty are significant for business organisations: the loyal customers cost less and are less sensitive to price than opportunistic clients, providing a stable source of income for the firm and increasing the business profitability (Hallowell, 1996; Mittal and Lassar, 1998; Rust and Zahorik, 1993). In some cases, the concept of commitment was used to describe the loyal customer behaviour, understood as the intention to continue an existing relationship with the salesperson and the company (Crosby et al., 1990; Garbarino and Johnson, 1999; Hess and Story, 2005). The researchers have outlined the complex relationship between satisfaction, trust, commitment and loyalty. In general, it is argued (Dick and Basu, 1994; Liang and Wang, 2004; Sirdeshmukh et al., 2002) that consumer behaviour is influenced by a mix of positive (e.g. quality, satisfaction, trust, reliability) and negative elements (e.g. inertia, circumstantial promotions, limited information, monopolistic market conditions). On the other hand, satisfaction and trust do not automatically ensure customer commitment and loyalty (O'Malley, 1988).

In order to investigate the relation between customer trust and loyalty, the present study has attempted to identify the service-related, customer-related, interaction-related and circumstantial factors that can significantly influence the customer loyalty towards trusted service providers.

## **2.1. Service-related factors**

Some authors have outlined the differences between service settings, emphasising the need to study separately the loyalty in process-dominant services, such as phone banking, and in outcome dominant services, such as a restaurant dining service (Lu and Tang, 2001). Other researchers have adopted the distinction between continuous service settings – e.g. telephone line connection, and discrete service transactions (Ranaweera and Prabhu, 2003). In the present study, the distinction between continuous and discrete, on one hand, and the difference between low risk and high risk services, on the other hand, is considered essential to understand the effect of trust on customer loyalty in various service settings. The perceived risk of the service is directly related with the classical definition of trust, which considers trust as the willingness to assume the risk of an opportunistic behaviour from the other party in a relationship (Mayer et al., 1995, Raimondi, 2000).

This study will consider the relation between customer trust and loyalty in four different service settings, characterised by the cross-tabulation between the type of service, and the level of perceived risk.

## **2.2. Customer-related factors**

Some studies have questioned the existence of loyal customer behaviour. The postmodernist society based on perpetual change and forced obsolescence encourage customer to seek for novel products, or for improvements of existing offers (Rowley and Dawes, 2000). From this perspective, it is important to verify the effect of novelty seeking behaviour on the level of customer loyalty towards trusted service providers. Therefore, the following research hypothesis has been formulated:  
*H1: The customer's propensity towards novelty seeking is significantly influencing the level of customer loyalty towards trusted service providers.*

The novelty seeking behaviour must be, however, moderated by the customer's propensity to assume risk. A risk adverse person will probably use only trusted service providers, trying to fulfil his/her novelty needs by modulating the existing relationship or by exploring alternative offers of the same service firm. To verify this assumption, the following research hypothesis has been formulated:

*H2: The customer's propensity towards risk is significantly influencing the level of customer loyalty towards trusted service providers.*

Some authors have argued that loyal behaviour can exist only when choice is freely available on the market, since in conditions of monopoly the relationship with the single supplier is the only alternative for customers (Sharma and Patterson, 2000). In the present study, all the service settings investigated are characterised by a competitive environment, with multiple service providers. However, it can be assumed that, even in a free competitive market, loyalty can be strongly limited when the level of market knowledge of the customer is very low or superficial. In this situation, the customer is sufficiently satisfied with the present service provider and does not try to search, collect and process information about the alternative offers existent on the market. Considering this possibility, the following research hypothesis has been formulated:

*H3: The level of customer's market knowledge will significantly influence the level of customer loyalty towards trusted service providers.*

## **2.3. Interaction-related factors**

The role of the switching barriers or costs implemented by service companies was also considered as an important factor in determining the customer's level of loyalty (Hellier et al., 2003; Ranawena and Prabhu, 2003; Zeithaml, 1981). To this factor, the present study adds the specific benefits that are introduced by service providers to reward loyal customer behaviour. Considering these two elements, the following research hypotheses can be formulated:

*H4: The switching barriers introduced by service providers are significantly influencing the level of customer loyalty towards trusted service providers.*

*H5: The specific benefits introduced by service providers are significantly influencing the level of customer loyalty towards trusted service providers.*

Several researchers have made a distinction between the hard and the soft attributes of services (Auh, 2005). The hard element is represented by the functional/technical processes that compose the service, which are often standardised in the basic

service offer. The soft side includes the interpersonal relation between the service provider and the customer, which is often adapted to the profile of every customer in function of his/her needs and style of interaction. Many researchers (Foster and Cadogan, 2000; Guenzi and Pelloni, 2004; Mittal and Lassar, 1996) have identified the level of interpersonal contact between the customer and the service provider as an essential element in judging the quality level of a service, and Gwinner et al. (1998) discovered that social benefits have a direct positive effect on customer loyalty. In the context of our research it is relevant to verify what is the influence of the interpersonal relationship on the customer loyalty towards trusted service providers, using the following research hypothesis:

*H6: The level of interpersonal relationship between the service provider and the customer is significantly influencing the level of customer loyalty towards trusted service providers.*

#### **2.4. Circumstantial factors**

In their study of disloyal customers, Rowley and Dawes (2000) have identified the possibility of temporary disloyalty determined by circumstantial factors. In relation with a service provider, some of the most frequent circumstantial situations that can induce disloyal customer behaviour are the temporary unavailability of the trusted service provider, an attractive promotion launched by competitor firms, or the reduced accessibility of the trusted service provider. Considering these factors, three research hypotheses have been formulated:

*H7: The temporary unavailability of the trusted service provider is significantly influencing the level of customer loyalty.*

*H8: The attractiveness of promotions launched by competitor firms is significantly influencing the level of customer loyalty towards trusted service providers.*

*H9: The temporary inaccessibility of the trusted service provider is significantly influencing the level of customer loyalty.*

### **3. Research methodology**

In order to answer the formulated research objectives, a combination of secondary and primary sources have been used to collect relevant data. In the first stage of the research process an extensive literature review was realised in order to identify and evaluate the existing theories regarding customer trust and its effect on customer loyalty, especially in the area of services. The literature review has provided relevant information which permitted the further development of the research framework and the formulation of more specific research hypotheses.

**Table 1: Examples of various service settings provided by respondents**

Level of risk / Continuity	Discrete Service	Continuous service
Low risk service	Restaurant, grocery retailer services, newspaper sales	Fixed or mobile phone connection, cable television
High risk service	House repair services, car repair services	Bank services, insurance services

In the second stage of the research process, the research framework was refined, verified and validated through 5 face-to-face interviews realised with randomly selected people. The interviews lasted between 30 and 45 minutes and took place in the waiting area of one major supermarket, located in Edinburgh, Scotland. These interviews indicated the need to study the relation between trust and customer loyalty in various service settings, as well as helping to define the major elements that influence this relation at individual level.

Finally, in the third stage of the research process, a total of 412 face-to-face interviews have been realised. These interviews lasted around 15-20 minutes, and the respondents being randomly selected from the waiting areas of UK supermarkets (3 supermarkets located in Edinburgh and 2 located in London). From the 412 respondents 214 have been interviewed in Edinburgh and 198 in London.

The respondents have been firstly asked to name trusted providers from continuous and discrete service settings, and then to evaluate the perceived level of risk they associated with each particular type of service. The respondents were then required to consider in more detail a highly trusted service provider from four different service categories: high or low risk continuous services, and high or low risk discrete services, and to evaluate their loyalty toward these firms, based on their existing behaviour and the intensity of future re-purchase intention. Table 1 presents the most frequent services selected by respondents in order to represent a specific service setting. Finally, the respondents were asked to evaluate various relation-based and circumstantial factors, and to answer a series of questions on their personal characteristics, that could influence their behaviour towards trusted service providers. Since the interaction-related factors, the circumstantial factors and the market knowledge of respondents have specific effects for each type of service, data has been collected for each of the four type of investigated service settings.

The collected data has been analysed with the SPSS software, using the Chi Square and Pearson's two-tailed correlation tests to verify the influence of various factors on the customers' loyalty towards trusted service providers.

## **4. Presentation and analysis of data**

### **4.1. The effect of trust on customer loyalty**

The analysis of the collected data has indicated four different level of customer loyalty towards trusted service providers:

- a. exclusive loyalty: the customer buys services exclusively from the most trusted service provider;
- b. high loyalty: the customer buys frequently from the most trusted service provider, but there are occasional instances when the customer acquires services from competitors. Often this solution is applied when circumstantial problems reduce the availability of, or the access to, the trusted service provider;
- c. medium loyalty: the customer buys from the trusted service provider and from an equally trusted competitor. This situation can be defined as shared loyalty, which is based on the shared trust in a small number of service providers, a behaviour already identified by O'Malley (1988);
- d. low loyalty: the customer buys from a multitude of relatively similar service providers, adopting the model of a 'fragmented loyalty'.

**Table 2: The level of customers' loyalty in various service settings**

Service setting / Level of loyalty	Exclusive	High	Medium	Low	Total
Continuous / N	305	0	82	25	412
Low risk %	74	0	19.9	6.1	100
Continuous / N	315	0	89	8	412
High risk %	76.5	0	21.6	1.9	100
Discrete / N	155	106	85	66	412
Low risk %	37.6	25.7	20.6	16	100
Discrete / N	252	22	122	16	412
High risk %	61.2	5.3	29.6	3.9	100

The data presented in Table 2 demonstrates that the level of customer loyalty is very different depending on a specific service setting. The exclusive loyalty is used predominantly in high risk service settings (continuous and discrete) as well as for low risk / continuous services. However, for the situation of low risk / discrete services, a large percentage of respondents have also indicated a preference towards occasional disloyalty (25.7%), shared loyalty (20.6%) and fragmented loyalty (16%). It is interesting to note that in continuous service settings the occasional disloyalty is not practiced by any respondent. The interviewees have indicated as reasons for this behaviour the high switching costs and the very low benefits offered by a temporary disloyalty, combined with the risk of using an unknown service provider. On the other hand there is relatively large group of respondents who use shared loyalty in continuous service settings (19.9% for low risk and 21.6% for high risk services). The respondents have indicated that this method helps them to take advantage of complementary advantages/benefits offered by two competing service providers which they trust, and to reduce the risk of unpredictable market evolution.

#### 4.2. The factors influencing the trust-loyalty relation

In order to investigate the influence of the three main categories of factors defined in the research framework (customer-related, interaction-related, and circumstantial factors), the Pearson two-tailed correlation test was applied to the analysed variables. The data presented in Table 3 indicate a very complex interdependence between loyalty and the investigated factors, which varies according to specific service settings.

In a setting characterised by low risk and continuous service (e.g. mobile phone connection), the level of loyalty has a strong negative connection with the personal levels of novelty seeing and of risk acceptance, but is positively influenced by the market knowledge of customers – which helps them to evaluate the competing service providers and to reinforce their trust in a specific service firm. The development of a personal relation between the service provider and the customer represents a significant disincentive to switch suppliers. It is interesting to note that the switching costs and the special benefits implemented by the service provider have a very limited influence on loyalty, as it is also the case with circumstantial factors.

**Table 3: The Pearson (sig. two-tailed) correlation between the level of customer loyalty and various types of factors**

	Level of loyalty Continuous / Low risk	Level of loyalty Continuous / High risk	Level of loyalty Discrete / Low risk	Level of loyalty Discrete / High risk
Novelty seeking	-.244** .000	-.094 .057	-.189** .000	-.104* .034
Risk acceptance	-.134** .006	-.123* .013	-.097* .048	-.110* .026
Market knowledge	.158** .001	-.105* .034	-.112* .023	-.203** .000
Personal relation	.166** .001	.296** .000	.269** .000	.209** .000
Switching costs	.094 .055	.277** .000	.016 .743	.104* .036
Special benefits	.031 .527	.172** .000	.214** .000	.113* .021
Availability	-.015 .759	-.045 .367	-.164** .001	-.148** .003
Competitor promotions	-.002 .969	-.007 .880	-.179** .000	-.005 .918
Accessibility	-.018 .714	-.054 .276	-.135** .006	-.118* .017

Note: \* Correlation is significant at 0.05 level

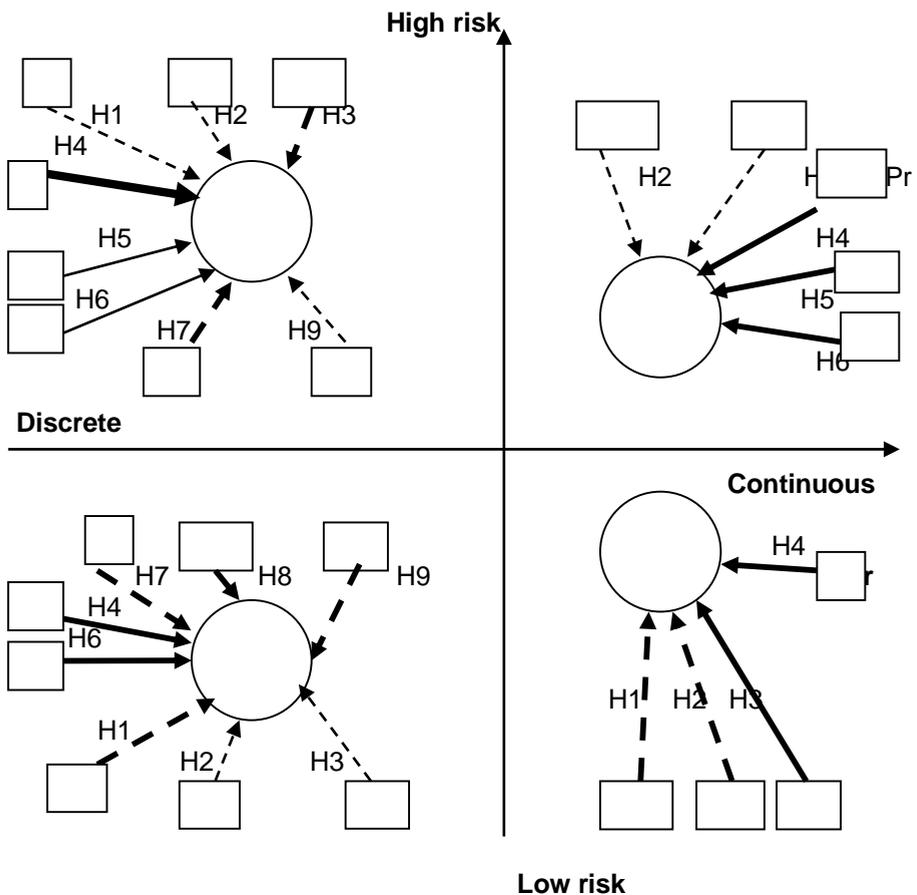
\*\* Correlation is significant at 0.01 level

For continuous services characterised by a high perceived risk, a high level of risk acceptance and of market knowledge can induce a disloyal behaviour. However, in this case the interaction-related factors can be effectively used by the service provider to discourage disloyal behaviour. As in the previous case, the circumstantial factors seem to have a very limited influence on the level of customer loyalty. The situation of discrete services provides the most complex range of influences. For discrete low risk services (e.g. restaurant launch), a high level of novelty seeing, risk acceptance and market knowledge will negatively influence customer loyalty towards trusted service providers. Paradoxically, many respondents have indicated that a trusted service provider can represent an incentive to explore other options, since the customer has always the possibility to return to the trusted firm. The development of personal relations and the application of special benefits can, however, strongly discourage a disloyal behaviour. The circumstantial factors have a strong negative relationship with the level of loyalty, which is explained by the highly competitive structure and the fragmented nature of this type of service setting. For discrete services characterised by a high level of perceived risk (e.g. house repair services), the market knowledge of customers can influence their level of loyalty – if the customer knows the name and the address of competing service providers, there is a higher possibility of disloyal behaviour. The customer's level of risk acceptance and novelty seeking present a significant negative correlation with the level of loyalty, although the link is weaker than for the level of market knowledge. The interaction-

related factors present a significant positive correlation with the evolution of customer loyalty, among them, the development of an interpersonal relation represent the strongest disincentive for disloyal behaviour. The temporary unavailability of the trusted service provider is strongly influencing the level of customer loyalty. It s interesting to note that the attractiveness of competitors' promotion does not induce a significant effect on customer loyalty, while the problems of access to the trusted service provider are negatively correlated with the level of customer loyalty.

### 5. Conclusion: A synthetic model of trust-loyalty relation

This study has investigated the influence of various categories of factors on the customer loyalty towards trusted services providers in four different service settings.



**Figure 1: A synthetic representation of the correlation between influencing factors and the level of customer loyalty in various service settings**

**Legend:**

Ns - novelty seeking

- Ra - risk acceptance
- Mk - market knowledge
- Pr - personal relation
- Sc - switching costs
- Sb - special benefits
- Av - availability
- Cp - competitor promotion
- Ac - accessibility
- Positive strong correlation 
- Positive weak correlation 
- Negative strong correlation 
- Negative weak influence 

The results of the data analysis indicate that customer loyalty is not a stable, easily predictable phenomenon, even for the firms that are trusted by their customers. The study has identified four different models of loyalty, which are adopted by consumers depending on the characteristics of the service setting: exclusive, frequent, shared and fragmented loyalty. The disloyal behaviour can be triggered by a desire for new experiences, by the knowledge of alternative service providers, or by circumstantial situations such as attractive competitors' promotions, or problems of availability of, or access to, the trusted service providers.

Nine research hypotheses have been formulated in this study, however, each of them had to be applied and tested in four different contexts of service settings. Considering the correlations identified between various categories of factors and the level of customer loyalty, a synthetic model can be developed to represent these multiple influences (see Figure 1).

The results of this study can be used by both academic researchers and professionals. Based on the research framework developed in this paper, other researchers can initiate similar projects in order to verify the validity of results in various cultural and service settings. The managers of service firms can also use the results presented in order to manipulate the level of customer loyalty, considering the specific characteristics of their service offer.

The study has a number of limitations related with its exploratory perspective. The number of influencing factors is limited, and future studies may identify additional factors with significant importance for the level of customer loyalty. On the other hand, no attempt has been made to identify the profile of various groups of customers that react to specific influencing factors. Further research is necessary to develop and refine this dimension, in order to provide the practitioners with a powerful tool in identifying and targeting specific groups of customers.

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## **SCHEMA CONGRUITY – A BASIS FOR EVALUATING AMBIENT ADVERTISING EFFECTIVENESS**

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**Abstract:** *The purpose of this paper is to develop a theoretical basis for evaluating ambient advertising in relation to the schema. Ambient advertising, a creative form of out-of-home advertising that conveys direct and contextual messages by using and often altering existing elements of the environment in a way that surprises the target audience, appears to be a solution to the increasing clutter from the media. This study draws on the schema congruity theory to offer a better understanding of how consumers are processing information received from advertisements. Schemas are organized structures of knowledge and expectations that consumers develop in order to categorize the incoming information, and that they access every time they are experiencing a new situation. The schema-based approach is important in understanding consumer behavior because consumers are facing an environment filled with similar brands and products promoted by ads that sound and look alike. According to schema congruity theory information perceived as schema congruent offers a comfortable feeling of familiarity and generates limited cognitive processing, whereas schema incongruent information generates surprise and triggers extensive cognitive processing in order to help individual make sense of the unusual situation. Taking into consideration the combination of the different levels of expectancy and relevancy there have been identified three congruency situations: extreme congruity, moderate incongruity and extreme incongruity. Existing research shows that moderate incongruent information offers the best results in recall and recognition and also the highest affect levels compared to extreme congruity and extreme incongruity. Based on evidence from literature this study attempts to position ambient advertising in the moderate incongruity category, thus theoretically proving the assumed effectiveness of this promotional tool. Therefore, this paper is a starting point in bringing the light in the under-researched field of ambient advertising and can offer a theoretical basis for future empirical research on the effectiveness of this promotional tool.*

**Keywords:** advertising; ambient advertising; schema; schema congruity theory; clutter; consumer behavior

**JEL classification:** M37; M31

## **1. Introduction**

Evidence from empirical research indicates a gradual decline of consumer attitudes towards advertising within the past decades (Zanot, 1984). Amongst the causes of the decline are the rising clutter and the intrusion of advertising messages (Zanot, 1984) and in the same time the increasing familiarity of individuals with current advertising efforts. Clutter is the amount of advertising in a medium (Elliott and Speck, 1998) and results from the ever-increasing number of commercial messages consumers are exposed to. Existing data show that advertisements sometimes occupy more than 50 percent of the contents of a certain medium (Belch and Belch 2003), thus raising the clutter at unprecedented levels. In addition, Elliott and Speck (1998) found that the higher the medium familiarity the lower the ad recall is, as consumers tend to ignore and avoid advertisements in the media they are most familiar with.

The increasing clutter has also affected consumers' information processing and learning behaviors. Individuals are becoming savvier as their understanding of marketers' persuasion techniques is improving every day. As a way to cope with the increasing clutter, consumers have developed schemas that act as protective shields (Dahlén and Edenius, 2007) against the massive amounts of promotional messages. The advertising schemas help individuals identify advertising and trigger an instinctive response of avoidance that is materialized in zapping, flipping the page or simply ignoring the ad.

In this context, ambient advertising has appeared and developed into a major form of promotional communication that seems to be able to overcome the problems faced by traditional advertising. Ambient ads use unconventional media and creative tactics to deliver the promotional message and to grab the attention of the target audience. Its placement in areas where consumers spend most of their time and where they don't expect to encounter promotional messages contributes to the effectiveness of ambient (Hutter and Hoffmann 2011), making it one of the most promising advertising techniques for the future.

The research at hand attempts to position ambient advertising on the schema congruity scale based on the evidence from existing research in both marketing and cognitive psychology areas. This positioning can offer a better understanding of the cognitive mechanisms triggered by this promotional technique and what are the drivers of ambient advertising effectiveness. Moreover, a better theoretical understanding of how ambient advertising works at a cognitive level can offer marketing scholars new opportunities for empirical research that could bring some new light in the under-researched field of unconventional advertising.

## **2. Schema theory**

The schema theory developed in social psychology assumes that cognitive processing is influenced by existing knowledge and it is used to explain how individuals process information by categorizing and evaluating it based on previous experience. Bartlett (1932), one of the pioneers in schema theory research, revealed that individuals organize the accumulated knowledge in so-called schemas, from where the information can be accessed by a word, an image, a symbol or an other cue (Warlaumont, 1997). Schemata are enduring understandings of a specific phenomenon that cannot be easily changed once they are established. When facing a new experience an individual's brain attempts to access the corresponding schema

in order to process the situation more rapidly (Beals, 1998).

Advertising is a form of incoming information that consumers must process. Research has shown that advertising effectiveness is dependent on the extent to which consumers process the information embedded in the commercial message. There is evidence supporting the assumption that individuals have developed an advertising schema (Friestad and Wright, 1994; Friestad and Wright, 1995; Dahlén and Edenius, 2007; Warlaumont, 1997), and therefore their processing behavior can be evaluated based on the schema theory. Existing empirical research indicates that advertising schemata negatively impact consumers' attention (Donthu, Cherijan, and Bhargava, 1993) and attitudes (Stafford and Stafford, 2002) towards advertisements increasing their suspicion against the commercial messages.

Schemas provide general expectations that influence processing of specific situations (Fiske and Taylor, 1984) According to schema theory, individuals access the information stored in the existing schemas every time they encounter a similar instance. As that information has already been processed people don't need to reevaluate the information. Therefore, the schema based processing is faster and easier.

With the aid of existing advertising schemas consumers can identify and interpret advertisements quickly as persuasive messages, their response being shaped by their previous knowledge and experiences in relation to the commercial attempts. Practically, advertising schemas can shape individuals' future response to advertising (Friestad and Wright, 1994), once identified as advertising (Dahlén and Edenius, 2007). According to Brown (2004), consumers ignore advertisements once the schema is activated. Furthermore, Speck and Elliott (1997) discuss avoidance as a common response to advertising, as consumers attempt to reduce their exposure to commercial messages by flipping, zapping, eliminating or ignoring ads.

## **2.1. Schema congruity theory**

Congruity theory attempts to examine the effects of confirmation and disconfirmation of expectations on individual response. The individual response is evaluated on both the information processing behavior and the evaluation behavior. The congruity theory pushes the schema theory even further, by investigating the impact of information based on its consistence or inconsistency with existing schemata. Thus, new experiences can correspond with existing schemas to a larger or smaller extent. If the new experience matches a schema it is congruent, whereas if it doesn't fit any existing schema is incongruent.

According to Mandler (1982) a situation congruent with existing schema generates familiarity and comfort and does not involve any cognitive effort. On the other hand, if a given situation does not match any schema, it stimulates the cognitive efforts to solve the perceived incongruity between the received information and existing schemata. The incongruent information is evaluated piecemeal (attribute by attribute) thus involving more time and effort (Sujan, 1985). The extent of incongruity influences an individual's overall feelings about that particular experience. Thus, if the incongruity is too important, the situation can be perceived negatively, as it can be irritating or even frustrating if the incongruity cannot be addressed. If the incongruity however is moderate, it may result in positive feelings affect, as the individual is able to interpret the new information successfully (Mandler 1982). This opinion is also supported by empirical research (Meyers-Levy and Tybout,, 1989;

Stayman et al, 1992) which shows that moderate schema incongruity produced more favorable evaluations than congruity or extreme incongruity.

The importance of advertising schemas is in close connection to the schema congruity theory. Similar to other areas of psychology where research has shown that schema-congruity influences processing and evaluation (Fiske 1982; Srull et al. 1985), the schema-congruity of advertising has a major role in the processing and evaluation of advertising messages. Consequently, it can influence the success or failure of an ad (Heckler and Childers 1992; Goodstein 1993).

## **2.2. Measuring schema congruity**

Heckler and Childers (1992) developed a bi-dimensional framework based on expectancy and relevancy that contributes to conceptualizing the schema incongruity in advertising. In this context, expectancy is the extent to which an ad is conform to consumer expectations about such advertising, whereas relevancy refers to the degree to which the incongruent elements from an ad provide meaningful information about the brand or the product, easing consumer cognitive process to identify the primary message of the ad (Joost and Verlegh, 2002).

In the same study, Heckler and Childers (1992) developed three categories of advertisements based on a combination of different levels of relevancy and expectancy: expected – relevant, unexpected – relevant, unexpected – irrelevant. Congruent ads include expected and relevant information that match the schema, extreme incongruent ads present unexpected and irrelevant information that do not fit any existing schema, whereas moderately incongruent ads include unexpected but relevant information, depicting novel ideas that challenge the existing schema but that could still be reconciled with it (Heckler and Childers, 1992; Mandler, 1982). The different perceptions of schema incongruity lead to the assumption that an optimal level of incongruity may be established. Yoon (2012) associated schema congruity theory with the theory of optimal stimulation level (Berlyne 1960). According to his findings, the external level of stimulation may determine an individual to seek for an increase if the level is too low or a reduction if the external stimulation is too high. Evidently, stimulation is perceived optimal if it is neither too low nor too high (Steenkamp and Baumgartner 1992). In addition, Raju (1980) assumed that optimal stimulation levels are different for every person. Thus, the final evaluation of an experience depends not only on the stimulation level, but also on how the individual interprets it in relation to his/her existing schemata. Therefore even if stimulation level is optimal, the final outcome may be a negative evaluation or a positive one depending on whether the interpretation failed or the individual did not considered it satisfactory or if it was successful (Yoon, 2012).

## **3. Ambient advertising**

Ambient advertising has become one of the most important forms of unconventional out-of-home advertising. Moreover, existing data shows that it is still expanding at fast pace, taking into consideration the important increase in its registered expenditure (Wehleit, 2003; PQ Media, 2007; PML Group, 2011). This form of promotion has become very popular lately among practitioners, because of its attention grabbing and its ability to stand out from the cluttered advertising environment..

The term “ambient” derives from ambience, which means surrounding. The first use of the concept in relation to advertising dates from the mid 1990’s and it belongs to Concord advertising, an outdoor specialized agency from London, who used it to define the “a bit different” advertising requested by agency’s clients (Luxton and Drummond 2000). Today, ambient advertising refers to a creative form of out-of-home advertising that conveys direct and contextual messages by using and often altering existing elements of the environment in a way that surprises the target audience (Jurca 2012).

Whether ambient advertising can be a viable alternative to traditional advertising it is still open to debate. However, until now the general opinion amongst marketing academicians is that ambient ads are more efficient when implemented as part of an integrated marketing communication campaign together with traditional advertising, rather than as a standalone strategy (Shankar and Horton, 1999, Luxton and Drummond, 2000, Reyburn, 2010, Lee Yuen, 2011). Consequently, the chances that ambient advertising might replace traditional ads are low, however it can enhance the results of the latter.

#### **4. Schema incongruity as a trigger of ambient advertising effectiveness**

The bi-dimensional framework of advertising incongruity developed by Heckler and Childers (1992) identified expectancy and relevancy as the two major factors in establishing the level of incongruity with existing schemas. Within this framework three situations were identified based on the different levels of expectancy and relevancy that an ad can display, expected – relevant, unexpected – relevant, unexpected – irrelevant. As mentioned above, the three possible combinations result in three different levels of congruity between the ad and the existing schemas: congruence, moderate incongruence and extreme incongruence. In what follows the paper will attempt to place ambient advertising in one of the three categories, in order to better assess its effectiveness.

As several authors agree upon, ambient advertising uses the unconventional placement (Luxton and Drummond, 2000; Shankar and Horton, 1999) and the non-traditional media (Pavel and Catoi, 2009; Lee Yuen, 2011) as drivers of surprise for consumers, in order to attract their attention and direct it to the advertising message. Surprise is the result of the divergence between perceptions and expectations (Hutter and Hoffmann, 2011). Thus, by confronting them with visual elements that normally cannot be found in that particular environment (Barnes, 1999) ambient ads challenge individuals’ expectations stored in the existing schemata, and the perceived incongruence generates surprise (Alden, Mukherjee and Hoyer, 2000). In the mind of the consumers, the new experience will neither correspond with schemata that fit an individual’s physical surroundings (e.g., a park or a bus station) nor with the advertising schemas that expect traditional advertising (e.g., on TV, in newspapers, on billboards). According to Waddill and McDaniel (1998), unusual stimuli are processed longer than commonplace stimuli, which can further positively influence the memory. This opinion is also supported by Mandler’s (1982) congruence theory according to which a schema incongruent situation will generate deeper and longer cognitive processing as the individual attempts to make sense of the incongruity.

For ambient advertising, the phrase “medium is the message” coined by Marshall McLuhan in the 1960s (cit. in Dahlén, 2005) is fundamental. As the meaning of the

term “ambient” suggests and in line with the previously mentioned definitions of concept, this promotional technique uses existing elements from the surrounding environment, that are often altered in order to be integrated into the message delivery (Jurca 2012). Reyburn (2010) believes that an ambient campaign must start from the environment, thus making the location one of the most important elements of ambient advertising. In order to be efficient, the ad must fit both the environment and the context in which the consumer encounters it and in the same time the brand must be relevant for the environment (Ryan-Segger, 2007, Reyburn, 2010). Vice versa, also the medium carrying the message and the whole environmental context become relevant for the brand, suggesting a mandatory interaction between the ad message, the brand and the environment. Existing empirical research also suggest an increase in the effectiveness of the advertisement when a match between the brand, the ad and the media context exist (Dahlén, 2005; Dahlén, Friberg and Nilsson, 2009). Following Mandler’s (1982) idea, although the initial surprise generated by the unexpectedness of the ad may startle the audience, after a deeper cognitive processing the audience can reconcile the incongruence of the situation with the existing schemata due to the relevancy of the ad for the promoted brand or product.

Furthermore, another aspect that needs to be taken into consideration is creativity. The concept described by Leo Burnet (1968) as “the art of establishing new and meaningful relationships between previously unrelated things in a manner that is relevant, believable, and in good taste, but which somehow presents the product in a fresh new light” is an important characteristic of ambient advertising. According to Baack, Wilson and Till (2008, p. 86) creative ads are “highly unique and highly relevant”. Sheinin, Varki and Ashley (2011) identified two dimensions of advertising creativity that seem to be accepted throughout the academic literature: the novelty of the execution (or divergence) which refers to how different an execution is from consumers’ expectation, and the relevance (or usefulness) of the message, referring to extent to which an ad contributes to consumers’ understanding of the advertised brand or product. These two dimensions of creativity can be connected with the two dimensions of schema congruency from Heckler and Childers’s model (1992), which the novelty of the execution representing the unexpectedness and the relevance of the message referring to the relevance of the ad. Therefore creativity can create a moderate level of schema incongruity that challenges consumers’ expectations and in the same time as it positively influences the effectiveness of the ad.

By analyzing the above evidence, a conclusion can be drawn in what regards the expectancy and relevancy levels of ambient advertising. Thus it is obvious that one of the basic characteristics of this promotional technique is the unexpected character revealed through both the unusual medium choice and the unusual execution (Luxton and Drummond, 2000) aimed to surprise the audience and grab their attention. Furthermore, although unexpected an ambient ad is relevant for the promoted brand or product as it integrates the medium and the whole context in the delivery of the promotional message. Comparing this evidence with Heckler and Childers’s model (1992) it can be inferred that ambient advertising would fit the unexpected-relevant category thus generating a moderate incongruity with consumers’ existing advertising schemata. Furthermore, by including ambient advertising in the moderate incongruity category of ads it can be a conclusion can be drawn about the effectiveness of this promotional technique. As previous

research showed that ads with moderate congruity seem to be the most effective in what regards both affect and memory these results could be extrapolated to the ambient advertising category also. This categorization offers however an important basis for future research aiming to prove empirically the theoretical conclusion drawn in this paper on ambient ads effectiveness.

## **5. Conclusion**

With the economic recession taking its toll on companies' businesses, the marketing budgets have been cut drastically in order to reduce costs. Marketers are being held responsible for every dime spent and the focus is on the return of investment. This context favors the development of ambient advertising, as its costs are lower than the costs of traditional media and its returns in respect to expenditure seem to be better (Reyburn 2010), delivering extremely targeted campaigns with minimal wastage (PML Group 2011).

Unlike traditional advertising, ambient ads don't use persuasive messages trying to convince the audience to buy, but rather they address to individual's subconscious challenging the existing schemas and creating memorable images of the promoted brands. The creativity and unexpectedness of the ambient execution creates surprise and gets the attention of the viewers, engaging their mind and activating their cognitive processes that help them understand the unusual situation they are facing, and consequently creating an increased awareness of the brand and the ad. However, the scarce empirical research to date that proves the effectiveness of ambient advertising may not be enough to convince advertisers to change their promotional tactics. This paper offers a theoretical basis for advertising researchers to better understand the impact of ambient advertising and how it influences consumers' attitudes in the buying process. However, there is an obvious need for a more in depth empirical research on how ambient advertising works and what cognitive processes triggers in audiences' brain.

Ambient advertising is a versatile promotional technique that deserves more attention as it can be used by both small and large companies (Gambetti, 2010). While large companies use ambient to build brand image, grab attention and differentiate their brand in the hypercompetitive markets small companies take advantage of the low costs of this promotional tool using it as a mean to create awareness within their target audiences (Gambetti, 2010). Moreover, ambient has also been increasingly used in campaigns that attempt to create awareness and change behaviors in respect to social issues regarding environment protection, health issues (such as AIDS), dangerous behaviors (such as drunk driving), world poverty, and so on. This makes ambient a versatile promotional tool that can help any organization reach their communication purposes.

A better understanding of ambient advertising will also benefit advertising agencies, which can focus on improving the characteristics of advertisements that generate positive response from audiences, thus offering quality, rather than concentrating on quantity. For example, depending on the brand and brand's target consumers, advertisers can create ads that are addressed to specific publics (with a higher or lower level of advertising literacy). Furthermore, a lower number of ads with a higher quality can also contribute to reducing the generally perceived advertising clutter that is one of the major factors reducing the effectiveness of promotional messages.

Even though the general opinion is that ambient advertising will not replace

traditional advertising (Krautsack and Aust, 2006), its use in a multi-media campaign can contribute to the success of the promotional attempt, as results of empirical research show (Wehleit, 2003). According to Krautsack and Aust (2006: 7) the “integration of ambient media in marketing plans will be a natural consequence of the development of the last 10 years”. There will be a constant evolution of the forms of ambient that will go along with the changes of consumers’ habits and marketers’ needs, but as long as the “key principles of creation, design and implementation are followed” (Krautsack and Aust 2006: 7) this advertising method will offer a way out of the clutter and into the mind of the consumers.

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# METHODOLOGICAL CONSIDERATIONS REGARDING THE SEGMENTATION OF HOUSEHOLD ENERGY CONSUMERS

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**Abstract:** *Over the last decade, the World has shown increased concern for climate change and energy security. The emergence of these issues has pushed many nations to pursue the development of clean domestic electricity production via renewable energy (RE) technologies. However, RE also comes with a higher production and investment cost, compared to most conventional fossil fuel based technologies. In order to analyse exactly how Romanian electricity consumers feel about the advantages and the disadvantages of RE, we have decided to perform a comprehensive study, which will constitute the core of a doctoral thesis regarding the Romanian energy sector and household consumers' willingness to pay for the positive attributes of RE. The current paper represents one step toward achieving the objectives of the above mentioned research, specifically dealing with the issue of segmenting household energy consumers given the context of the Romanian energy sector. It is an argumentative literature review, which seeks to critically assess the methodology used for customer segmentation in general and for household energy users in particular. Building on the experience of previous studies, the paper aims to determine the most adequate segmentation procedure given the context and the objectives of the overall doctoral research. After assessing the advantages and disadvantages of various methodologies, a psychographic segmentation of household consumers based on general life practices is chosen, mainly because it provides more insights into consumers compared to traditional socio-demographic segmentation by focusing on lifestyles and not external characteristics, but it is also realistically implementable compared to more complex procedures such as the standard AIO. However, the life practice scale developed by [Axsen et al. \(2012\)](#) will need to be properly adapted to the specific objectives of the study and to the context of the Romanian energy sector. All modifications will be based on the results of previous research performed by us and on a qualitative study among industry experts and consumers.*

**Keywords:** energy; segmentation; consumer behaviour; psychographics; lifestyle

**JEL classification:** M31; Q41

## 1. Research Background

The energy sector has been the engine driving the fundamental development of humanity ever since the end of the nineteenth century, when electricity became widely used to provide public lighting and transportation in the world's busiest commercial hubs. Nowadays, our personal and professional lives are so intertwined with the need for constant access to electricity that ensuring the stability of the energy sector has become a matter of national security for most, if not all, countries

in the world.

Over the last decades, the international energy markets have been subjected to various shocks, such as steep rises in fuel acquisition prices ([Hopkins, 2008](#)) and even outright interruption of fuel supply ([Jolly, 2009](#)). The emergence of such instability, combined with the ever more tangible negative effects of traditional electricity generation on human health and the environment, has pushed many nations to pursue the development of clean domestic electricity production via renewable energy (RE) technologies.

One of the regions most affected by supply shocks has been Europe, which has seen a rapid growth in its RE production ([World Bank, 2013](#)). Due to recently passed legislation regarding support mechanisms for RE development, Romania has also seen a steep increase in its RE installed base over the last few years ([EWEA, 2013](#)). However, RE also comes with a higher production and investment cost, compared to most conventional fossil fuel based technologies ([Rogner, 2010](#)). Considering the financial difficulties which the whole world and especially Europe are currently facing, the perspective of rising electricity costs may be displeasing for most consumers.

Severe public reaction to increases in energy prices could be seen recently in Bulgaria, where, due to the low average income level, electricity represents a significant part of the household budget ([Euronews, 2013](#)). In order to analyse exactly how Romanian electricity consumers feel about the advantages and the disadvantages of RE, we have decided to perform a comprehensive study regarding the Romanian energy sector and household consumers' willingness to pay for the positive attributes of RE. This research will represent the core of a doctoral thesis on the subject, centred on two main objectives:

- determining Romanian household consumers' willingness to pay in order to benefit from the positive effects of utilising RE
- describing the typologies of Romanian household electricity consumers based on customer segmentation

The doctoral research process was preceded by a series of articles written in collaboration with industry specialists with middle-management and top-management roles in the strategic marketing function of one of the world's largest energy companies ([Maxim and Thoma, 2011](#); [Maxim et al., 2011](#)). These works represented the basis of a dissertation thesis which offered some projections regarding the future evolution of the European RE sector and illustrated some potential development strategies for renewable energy companies ([Maxim, 2011](#)). The aim of the current paper is to establish a methodological approach to satisfying the second objective of the above mentioned doctoral research – describing the typologies of consumers based on customer segmentation. This will be a theoretical paper, based on a review of general and energy marketing research. Section 2 of the paper will present the specific context of the Romanian energy sector. Section 3 will illustrate some of the previous approaches used in segmenting energy consumers. Section 4 will describe the segmentation approach chosen for the current study and will argue its level of adequacy and utility considering the specific context of the research. The final section of the paper will provide an outline for the next steps to be taken in order to achieve the proposed objective and finalize the doctoral research process.

## 2. The Romanian Energy Sector

The Romanian energy sector has been going through a long and significant transformation which started in the second half of the '90s. These changes came as a direct result of the transition to a free-market economy and Romania's strengthening connection with the European Union, of which it became a member in 2007. This section will briefly address the most significant of these changes, starting with the liberalization of the energy sector, the introduction of a RE support scheme and, most recently, the gradual phasing out of regulated electricity tariffs.

In 1998, the Romanian Government issued a decision through which RENEL, the state-run company which had a monopoly position over the entire electricity sector, was broken up into several companies ([ANRE, 2012c](#)), generally grouped along the main components of the energy value chain: generation (or production), transmission (high voltage transportation of electricity), distribution (medium and small voltage transportation of electricity up to the end-user) and supply (sale of electricity to the end-user). Over the following decade, these companies went through further restructuring, privatization, consolidation and even liquidation. Today, the electricity sector is much more granular, especially with regard to generators and suppliers. The state run companies still represent a significant portion of the distribution and generation components, while the transmission is controlled by a single state company which, through its subsidiaries, acts as a supervisor and facilitator of wholesale energy transactions (similar to Spain's Red Eléctrica) ([Red Eléctrica de España, 2013](#)).

The liberalization or "opening" of the electricity market was implemented in Romania in order to harmonize the internal legislation with the one applicable in the other member states of the European Union. Thus, since the 1<sup>st</sup> of July 2007, all Romanian consumers (industrial, commercial or household) are free to choose the company which supplies them with electricity ([ANRE, 2013](#)). However, by the end of 2011, none of the 8.4 mil household consumers had changed suppliers, likely due to the lack of information regarding the possibility and the procedure that needs to be followed, but also due to uncertainties regarding the prices of electricity ([ANRE, 2012c](#)).

All household consumers continue to benefit from a regulated tariff. This means that the National Agency for Regulation in the Energy Sector (ANRE) establishes the price at which suppliers sell electricity to end-users. The tariff is periodically updated. However, starting with September 2012 and July 2013 for companies and households respectively, this system has begun being phased out and replaced with a tariff calculated based on the average costs of electricity observed on the competitive market ([ANRE, 2012b](#)). Thus, any discrepancies between the regulated tariff and the actual costs of supplying energy to consumers will be eliminated. In theory, the measure should encourage consumers to negotiate and opt for the most cost effective offers on the market and suppliers will be motivated to become more competitive in terms of price, resulting in lower electricity costs overall. It remains to be seen whether or not this will actually happen. However, it is certain that consumers will become more aware of the market and of the possibility to change their supplier, making marketing strategies, such as positioning through differentiation and segmentation, more viable for electricity sellers.

With regard to the support mechanisms used to promote the development of RE,

two approaches seem to be most frequently used, especially in Europe: green certificates and feed-in tariffs. Out of these, the Romanian Government chose to implement a support mechanism based on green certificates (GCs). While feed-in tariffs also encourage small, non-specialized generators (household and commercial), leading to a faster increase of the RE production rate, GCs are more adequate for attracting large specialized investors. As with most such mechanisms, in Romania GCs are awarded to green energy generators for a certain amount of electricity which was produced and delivered into the grid. Suppliers are required by law to acquire a certain amount of GCs on the open market and are allowed to transfer the cost of these to the final consumer ([ANRE, 2012a](#)). Choosing a GC system for promoting ER development seems to be the right choice for Romania, considering that by the end of 2010, the country had already reached a 23.6% share of RE in its overall production, out of the 24% established as a target for 2020 through the 2009/28/EC Directive ([European Commission, 2013](#)).

The following sections will look at how previous research has approached the task of segmenting energy users and will illustrate the relevance of customer segmentation considering the context of the Romanian energy sector as described above.

### **3. Past approaches to customer segmentation in the energy sector**

There is evidence that customer segmentation as a marketing strategy was already being implemented within some large industries (household appliances, automotive, tobacco) in the period immediately following the Second World War ([Smith, 1956](#)). However, the first author to actually define and structure this approach seems to have been Wendell Smith in the year 1956. His aim was to provide a marketing vision to the classical and neoclassical economic theory. Thus, starting from concepts such as free market and perfect competition, he notices that demand is not convergent, but actually divergent, with consumers manifesting different specific tastes and preferences. The author wishes to convey the understanding of this heterogeneous market as a sum of “slices” or homogeneous sub-markets which result from the divergence of preferences. He further proposes that companies should approach these “segments” in a differentiated manner in order to satisfy consumer needs more precisely ([Smith, 1956](#)).

The emergence of segmentation brought about the end of standardized mass production (as per Henry Ford’s famous aphorism: “You can buy the Model T in any colour, as long as it’s black”). It is from this point onward that marketing truly begins to develop as a science and as a company function through concepts, methodologies and commercial strategies such as differential advantage, market research, positioning and product differentiation ([Munteanu et al., 2008: 13-17](#)).

#### **3.1. Socio-demographic segmentation**

Among the first and most frequently used approaches to market segmentation were those based on a combination of external or “visible” characteristics: geographical, social and demographical ([Diamantopoulos et al., 2003](#)). These have frequently been referred to as socio-demographics. They represent consumer traits which can be observed externally or which are recorded in a standard format as population statistics: age, sex, income, education, profession, place of residence, marriage status, number of children etc. Such variables have been widely used in the

segmentation process primarily because, compared to other methodologies, socio-demographics are widely available ([Myers, 1996](#)). Generally, they can be obtained without significant costs (or even freely) and their processing and analysis is much more straightforward than, for example, that of personality traits.

In the case of studies concerning the energy sector or environmental protection, socio-demographic segmentation has been frequently used in order to assess attitudes, beliefs and the passive ecological behaviour of consumers, as well as their intention to purchase RE micro-generation equipment ([Ichim, 2012](#); [Menegaki, 2012](#); [Mozumder et al., 2011](#); [Zhang and Wu, 2012](#)). However, in analysing purchase intent, some researchers have combined socio-demographics with psychological traits, such as perception of control or motivation ([Leenheer et al., 2011](#)).

Diamantopoulos et al. combine a comprehensive literature review with an empirical study in their attempt to validate the relationship between socio-demographics and environmental consciousness (assessed as a combination between knowledge, attitude and behaviour) ([Diamantopoulos et al., 2003](#)). Their research was partially motivated by the fact that the majority of studies regarding environmental consciousness were, at that time, focused only on energy consumers from the United States, while their research was targeting the UK population. Diamantopoulos et al. conclude that socio-demographic variables have a weak explanatory power regarding the variance of environmental consciousness and are also unable to explain the behavioural component of consumers. However, they argue that the use of socio-demographics in characterizing consumers is ultimately useful in fine-tuning marketing communication campaigns, given that media consumption profiles are based on such segmentation variables.

One possible explanation found by Diamantopoulos et al. for their results is that there is a generally high level of environmental awareness among Western consumers, regardless of their demographic profile. Thus, in order to achieve a useful segmentation, a more profound analysis would be required – one which would go deeper than the surface level of socio-demographic traits.

### **3.2. Lifestyle segmentation and psychographics**

In order to compensate for the above mentioned shortcomings of consumer studies based on socio-demographics, researchers began to include several psychological variables in their analyses. The combination of “psychology” and “demographics” gave rise to the term “psychographics”, which refers to a much more complex analysis of consumer behaviour which can prove to be a lot more insightful both for academic and managerial purposes. The first such studies relied mainly on psychological research instruments, which were used to generate personality profiles. However, practice again proved that there is a weak correlation between such profiles and consumer behaviour. Thus, they were replaced by analyses focused on “lifestyles” ([Vyncke, 2002](#)).

From a marketing perspective, lifestyle means “a system for assessing an individual, based on his activities, interests, opinions, likes, dislikes and consumption patterns” ([Maxim and Gherasim, 2000: 160](#)) - in other words, the way in which the consumer lives and spends money. Market research focused on lifestyles can prove to be highly valuable, since it can generate both an account of how consumers behave, as well as an understanding of the internal motivation of their actions. However,

such studies can prove to be highly complex and difficult to implement. In addition, there is currently no standardized theoretical framework which can be applied in order to ensure consistency and comparability among various pieces of research. The most widely used method for studying lifestyles is called AIO (activities, interests and opinions) ([Datculescu, 2006](#); [Maxim and Gherasim, 2000](#); [Vyncke, 2002](#)). Activities refers to the actions that the consumer performs (shopping, work, practicing sports etc.). Interest is analysed in relation to something (family, work, an object, a service etc.), while opinions are descriptions of the beliefs and points of view of a consumer.

In order to perform an analysis on these three dimensions, a battery of AIO sentences needs to be created (e.g. "I go shopping several times a week", "Usually, I am interested in celebrity news", "People should be more faithful" etc.). Next, a large scale study is required in order to quantify the degree in which people agree or disagree with each sentence. Then, the sentences need to be reduced or condensed using factor analysis so that, in the end, we are left with a set of variables which respect the "mutually exclusive, collectively exhaustive" principle ([Rasiel and Friga, 2001: 3](#)).

Although the method has been used successfully in the past, it is difficult to implement due to the large scale survey associated with it: 200 – 500 AIO sentences are usually required ([Datculescu, 2006: 181](#)), and factor analysis practice dictates that 5 – 10 respondents are required for each sentence to be analysed ([Pallant, 2011: 183](#)). Thus, the implementation of AIO is problematic both due to the large sample size (1,000 – 10,000 respondents) and due to the significant effort that a respondent makes in order to complete a questionnaire made up of several hundred items.

As a solution to this issue, more recent research attempted to use values as measures of lifestyle. Values can be defined as trans-situational objectives of varied importance which act as guiding principles for an individual's life. Researchers have brought several arguments in favour of this method (e.g. wider applicability, transcendence of specific situations etc.), but the most significant is the fact that research instruments now needed to contain 10 – 20 sentences, as opposed to 200 – 500 ([Vyncke, 2002](#)). The main disadvantage of value based evaluations is the lack of a theoretical framework to guide researchers in the creation of the instrument. Some batteries exist which were considered to be somewhat standard, such as the one proposed by [Rokeach \(1973\)](#). However, some researchers argued that this was only applicable to American middle class families ([Ness and Stith, 1984](#)). This is a good example of why a standard set of variables cannot be established, since values tend to be circumstantial (specific to a certain geographical area, social class or even time period). Since a universally valid scale does not exist, researchers need to perform an initial exploratory study (based on primary or secondary data) in order to establish a relevant set of variables for the population to be examined. Only after completing this initial stage can they begin the actual lifestyle research.

[Vyncke \(2002\)](#) attempts such an approach by performing a large scale exploratory study aimed at creating and demonstrating the practical validity of a lifestyle evaluation instrument. This was built starting from a set of values (35 items), but also adding three other concepts: life visions (20 items), aesthetic styles (28 items) and media preferences (42 items), naming the overall scale VLAM. Significant effort

went into designing the instrument: 5 quantitative and qualitative studies with a total number of nearly 1,000 respondents. The final result is tested through a segmentation exercise applied to four very different markets (automotive, tourism, politics and media). Although the VLAM construct is proven to be more useful than socio-demographics, its complexity resembles that of AIO batteries (125 items excluding socio-demographics).

The more recent research concerning the energy business utilizes more refined and practical approaches for customer segmentation. They tend to use evaluation scales of 10 – 20 items (constructed based on secondary research), which generally address customer beliefs and behaviour. For example, [Sütterlin et al. \(2011\)](#) utilize a scale built around energy consumption patterns and respondents' beliefs regarding the energy sector, while [Axsen et al. \(2012\)](#) use a scale consisting of general "life practices" of consumers. Both studies use cluster analysis to generate market segments and Axsen et al. also use factor analysis in order to compress their segmentation variables.

The scale used by Axsen et al. was constructed based on the theory of [Giddens \(1991\)](#) regarding lifestyle sectors. These are sets of activities which the community or society perceive as being coherent. They are tied to various points of reference within an individual's existence (e.g. family orientation, career orientation, outdoor and sports orientation etc.) and combined they form an individual's "self-concept" ([Axsen et al., 2012](#)).

As a conclusion, there are numerous studies such as that of [Sanquist et al. \(2012\)](#) or any of the ones listed above, that may or may not refer to the energy sector, which prove that a characterization and especially a segmentation of consumers based on lifestyles is more efficient in explaining their purchasing behaviour than the more traditional socio-demographic approaches. Each of the papers mentioned also illustrates some disadvantages specific to the lifestyle methodology, but the general consensus is that the added value of this approach is enough to compensate for any shortcomings, especially if caution is taken when establishing the items to be used in the segmentation scale.

Taking into consideration all of the aspects mentioned above, the segmentation of energy consumers for the present doctoral research will be based on psychographics and will use a set of sentences which illustrate consumer life practices, similar to the example offered by Axsen et al. The following section will offer some additional arguments for this choice and will illustrate its applicability in the context of the Romanian energy sector.

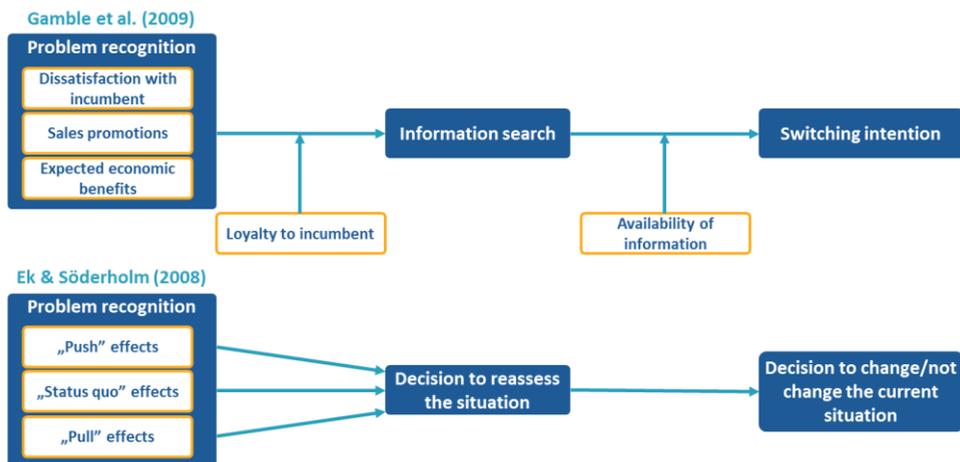
#### **4. The segmentation of Romanian energy consumers**

As mentioned in the previous section, the segmentation method chosen for this research is based on analysing lifestyles. Marketing specialists include lifestyle among the principal factors which explain how consumer behaviour is formed and expressed ([Maxim and Gherasim, 2000: 160](#)). Moreover, the last few years have seen significant changes in the legislation governing how the Romanian retail electricity market functions, giving end-users a more active role. Thus, an incursion into the basic theory of consumer behaviour would be relevant.

Section 2 offered some details regarding the changes which took place in the Romanian retail electricity market since 2007 and especially 2013. The relationship between suppliers and customers has been liberalized and the regulated sales

tariffs have begun being phased out and replaced with market based tariffs. The most significant change is that consumers will be encouraged to have an active behaviour on the market by opting for electricity suppliers based price or their own specific preferences. Since supplier switching is the equivalent of an acquisition, this means that a decision making process for the purchase will take place, as defined by theoretical frameworks ([Munteanu et al., 2008: 77](#)).

[Gamble et al. \(2009\)](#) and [Ek and Söderholm \(2008\)](#) both endeavour to analyse energy consumer behaviour in order to understand the reasons why Swedish household customer tend to have a low supplier switching rate, in spite of the fact that the electricity market in Sweden was liberalized in 1996 (more than a decade prior to the two studies). In both cases, the authors identify three different factors which determine the emergence of the purchase behaviour (as seen in figure 1). In addition, Gamble et al. identify two variables which act as obstacles for the completion of the decision making process: loyalty toward the incumbent supplier (a mostly emotional obstacle) and information availability (which creates an opportunity cost due to the time spent getting informed). Other researchers conclude that a lack of information regarding the switching procedure and the difficulty of comparing electricity tariffs among different companies are also major obstacles for the decision to change suppliers ([Salmela and Varho, 2006](#); [von der Fehr and Hansen, 2010](#)).



**Figure 1:** Models based on energy consumers' decision making process  
Adapted from: [Ek and Söderholm \(2008\)](#); [Gamble et al. \(2009\)](#)

The liberalization and deregulation of the energy sector in Romania will allow for a differentiation of the services offered by suppliers. They will be able to compete on matters such as tariffs, service quality or even energy mix (i.e. the proportion of RE in the total amount of electricity sold). If we consider the two models illustrated in figure 1 and refer only to the proportion of RE in the energy mix as a differentiating factor, we can conclude that it would potentially generate “push” (displeasure with current supplier) and “pull” (attractiveness to other sellers) effects as per the Ek and Söderholm model. Similarly, it could generate “dissatisfaction with incumbent” or it can be used as a “sales promotion” point as per the Gamble et al. model.

Coming back to the discussion regarding the choice of segmentation methods, as concluded from the previous section, psychographics has an increased utility in determining consumer profiles. In addition, it is to be expected that companies which sell electricity are already able to perform a segmentation of their customers based on socio-demographics using the data included in sales contracts and public statistics. However, a psychographic segmentation has the potential to generate insightful consumer profiles which would be highly useful in understanding the structure of the liberalized retail market, so that suppliers can build adequate marketing strategies.

Out of the various psychographic segmentation procedures presented in section 3, the approach used by Axsen et al. is considered to be the most adequate for the current research process. By comparison, the AIO and VLAM procedures are considered to be too demanding both for the limited budget of this research and for the cognitive and temporal availability of the respondents, while the values based approach is likely to have limited accuracy without first carrying out a broad exploratory pilot study. In addition, analysing a combination of consumer lifestyle sectors would allow for a more comprehensive understanding of energy users than a segmentation based primarily on their environmental attitudes. Finally, if the research instrument would put too much focus on ecological behaviour, it could generate a social desirability effect ([Axsen et al., 2012](#)).

## 5. Next steps

In conclusion, the current doctoral research will utilize an adapted version of the life practices scale proposed by Axsen et al. in order to achieve a psychographic segmentation of Romanian energy consumers. The 15 statements listed in Annex 1 will, however, need to be adjusted to suit the local context and the specific objectives of this research project (e.g. no focus on researching automobiles). All modifications will be based on the results of previous research performed by us and on a qualitative study among industry experts and consumers. The resulting scale will be pretested and further modified as needed and the final construct will be included in the main instrument of the doctoral research.

### Annex 1 – Life practices scale used by [Axsen et al. \(2012\)](#)

*How often do you engage in each of the following activities? (Never, Rarely, Occasionally, Frequently, Very Frequently)*

- Developing your career
- Discussing or researching automobiles
- Helping the environment
- Home remodelling or “fix-it” projects
- Nature and the outdoors
- Playing sports, recreation or exercise
- Religious or spiritual practices
- Researching or trying new technology
- School, lectures or other education
- Shopping
- Socializing with others
- Taking care of/spending time with family
- Using the internet for fun or leisure

- Volunteering or giving to charity
- Watching TV or movies

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# SEGMENTATION OF SME PORTFOLIO IN BANKING SYSTEM (CONSIDERATIONS)

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**Abstract:** *The Small and Medium Enterprises (SMEs) represent an important target market for commercial Banks. In this respect, finding the best methods for designing and implementing the optimal marketing strategies (for this target) are a continuous concern for the marketing specialists and researchers from the banking system; the purpose is to find the most suitable service model for these companies. SME portfolio of a bank is not homogeneous, different characteristics and behaviours being identified. The current paper reveals empirical evidence about SME portfolio characteristics and segmentation methods used in banking system. Its purpose is to identify if segmentation has an impact in finding the optimal marketing strategies and service model and if this hypothesis might be applicable for any commercial bank, irrespective of country/ region. Some banks are segmenting the SME portfolio by a single criterion: the annual company (official) turnover; others are considering also profitability and other financial indicators of the company. In some cases, even the banking behaviour becomes a criterion. For all cases, creating scenarios with different thresholds and estimating the impact in profitability and volumes are two mandatory steps in establishing the final segmentation (criteria) matrix. Details about each of these segmentation methods may be found in the paper. Testing the final matrix of criteria is also detailed, with the purpose of making realistic estimations. Example for lending products is provided; the product offer is presented as responding to needs of targeted sub segment and therefore being correlated with the sub segment characteristics. Identifying key issues and trends leads to further action plan proposal. Depending on overall strategy and commercial target of the bank, the focus may shift, one or more sub segments becoming high priority (for acquisition/ activation/ retention/ cross sell/ up sell/ increase profitability etc.), while others (risky/ non-profitable etc.) may be left aside. This entire shift in strategy is considering also growth potential per sub segment. Examples are provided for different strategies considering growth potential of each sub segment.*

**Keywords:** *SME; banking; marketing; strategy; segmentation; lending.*

**JEL classification:** *M31; G21; L22.*

## **1. Introduction**

The segment concept (including also the sub segment concept) is related to a division (or subdivision) of an overall data base (portfolio). It has similar and easy to define characteristics.

Any segment is related to a specific potential and is relevant in terms of the number of members. From the authors perspective, the segmentation, referred to as an action (or method) has the aim to identify similar behaviours and the scope of estimating potential growth, overall and split (in smaller clusters - in our case, we

are referring to segments, sub segments, clusters of a bank's SME portfolio). By creating clusters and applying different thresholds scenarios, important conclusions (such as correlations with the commercial results in terms of impact) may be found, leading to a more accurate estimation of potential. From a bank perspective, the potential is defined in terms of turnover, revenues, lending and liabilities volumes. By analyzing existing portfolio and potential estimation, an extrapolation (of the conclusions) can be applied also to the potential data base; therefore, an overall estimation can be done.

This is why, segmentation is an essential step in defining the marketing strategy (for existing clients' portfolio, but for potential clients also). Calculation of profitability per each segment (even by the simplest method of average net revenue generated to the bank by a client), is leading to establishing the most profitable segments from the existing portfolio. It also leads to identify the highest potential segment (in terms of business increase), while correlated to other criteria (for example, comparison between the company annual turnover and the turnover made by the company through the bank in the same year of analysis). Based on the segmentation analysis and conclusions, different strategic alternatives are suitable for each important segment (for example: retention and loyalty increase for very profitable clients of the bank; turnover increase, loan volume increase, cross sell, up sell for non profitable clients with high potential and so on). On the other hand, segmentation process and calculation of profitability leads to identification of clusters which are generating loss. For sure, it is important to consider also these clusters/ segments and to establish an action plan in order to minimize the loss and increase the profitability of the overall SME portfolio.

## **2. Banking System Service Model for SME Clients**

The SME Service Model of a Bank implies the presence of the customer: face to face with the service provider (usually a financing advisor or an operational staff from a branch), but also self-service, while using online banking, other applications of equipments provided by the bank.

Usually, pro-active selling by need identification and maintenance of the portfolio of clients is the financing advisor's responsibility, while the operational staff is involved in re-active responses to transactional needs of the customers in a certain moment of time. For acquisition and offering to potential clients, the responsibilities can be split, and even the branch manager can take initiative if the client value or client potential is high.

With the purpose of helping the branches in structuring the "consolidated" offer for a client, the Marketing Department can design commercial campaigns, with predefined target, or special offers to be applied based on different criteria. In order to better address the offer, before designing the campaign, portfolio analysis and segmentation is done. Commercial campaigns may be different for each identified sub segment; this differentiation may occur when different strategies are designed.

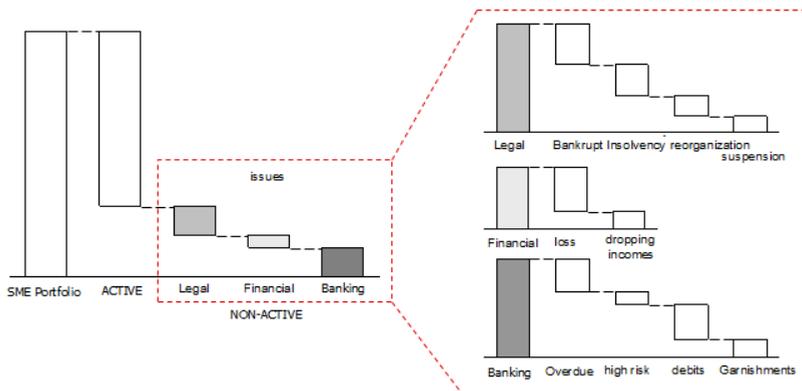
### **2.1. SME Portfolio Analysis and Segmentation**

The banking services are very different when considering segments of clients. The segmentation strategy and process can be done based on many criteria. The banks may address specific offers (and have different divisions and departments) to the following categories (Sources: Romanian banks official sites): Low revenue

Individuals; High revenue Individuals; Private clients; Micro, Small and Medium Enterprises (SME); Large companies (Corporate); Freelancers; Non-Profit Organizations; Public Institutions.

While designing a marketing strategy for SME clients, the first step is to analyze the behaviour and potential of the clients from the (existing or potential) target. If on the market, information about the potential target is limited (meaning expensive or lack of information), a good solution is to deeply analyze the existing portfolio of clients. In this respect, it is important first of all to clean up the portfolio data base, by flagging and excluding the clients with negative signals (categorized as “non-active clients”). At this stage, the portfolio analysis focuses on identifying the unwanted “behaviours”, the clients that generate losses or who have a high potential to generate losses.

The first step consists in analyzing the clients’ portfolio structure and eliminating from the database the clients that have one or several problems (negative signals). An example for the structure of an SME portfolio and the most common negative signals met are shown in the figure below. The figure reveals the split of an SME portfolio into two major categories (active and non-Active Clients), as a prior mandatory step before the segmentation. In authors’ opinion, the active clients of a bank are those resulting through elimination of clients with negative aspects from the portfolio data base. In this respect, identifying all “bad” clients is mandatory; for simplification, negative signals were categorized into: legal negative aspects, financial negative aspects, banking perspective negative aspects. Details regarding each category are shown:



**Figure 1:** Active and Non-Active Clients  
*Source: Personal Contribution of Authors*

The second step of segmentation may refer to clean the data base (portfolio) by eliminating the non-active cluster. After cleaning up the data base, the next step consists in establishing the segmentation of the remaining clients (so called active portfolio of SME clients). The segmentation takes into account different criteria, the most common being the related to company characteristics and banking behaviour. The purpose is to identify common behaviours, in order to establish the categories of clients with a high potential in terms of profitability (in the specific sense, of

course, of the profitability gained through offering a crediting facility).

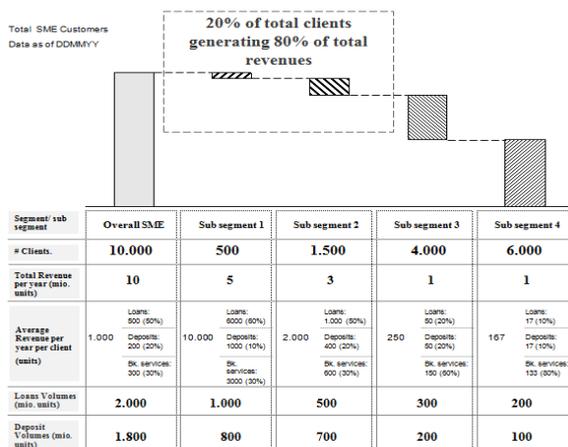
The most common segmentation criteria are related to company characteristics:

- Company turnover, profitability and other financial indicators;
- Field of activity (because the credit risk policy could impose to avoid offering lending facilities to clients belonging to industries with a high risk; it's well - known that, once the economic crisis appeared, the building field of activity suddenly became a sector where credits were being offered only as an exception);
- Geographic Region;
- The debt service (including the debt payment to the state budget).

Other criteria refer to the banking behaviour:

- Incoming payments - turnover on current accounts;
- Revenue generated for the bank in a certain period of time;
- The banking products held at a certain period of time (usually, the last available reports), compared with the identified products potential
- Volumes (Loans and or Deposits);
- The seniority of the client (beginning with the date when the account was opened);
- The payment behaviour, for clients with loans;
- Collateral coverage level;
- The commercial campaigns which had an impact upon the client/which didn't have an impact.

An example of segmentation analysis from banking behaviour perspective is shown in the following figure.



**Figure 2:** Banking Behaviour as Segmentation Criteria

Source: Personal Contribution of Authors

Segments become real targets when the potential is considered large enough and when the characteristics and banking behavior of the segments allow a special positioning which can create a value proposition for the clients in the segment.

From authors' perspective, a market watch analysis is mandatory, so is a qualitative research in order to identify the most adequate solutions for the implementation. If needed, a testing session will be set up. Before roll-out of the new strategy, a pilot

might be done in order to identify aspects to be improved/removed/added. After the implementation, the monitoring of the results and the constant communication is very important. Sometimes lack of monitoring may influence the profitability.

Negative signals can be identified after the segmentation is already designed and the strategy is already set up. This happens because the risk profile and the eligibility of the client is analyzed only after receiving detailed information from each client; for example, some filters will include the rating, the debt service, possible to be made only based on documents (usually financial and legal documents) provided by the client's representatives.

## **2.2. Characteristics of SME Banking Products**

Each SME is different and therefore the banking services are unique. The dependency between the company's characteristics and the service is very high. For some companies, the service is standard; for others, is tailor made (this approach is appropriate to be used for more complex companies and needs).

The quality of the banking services for SMEs is very hard to analyze, especially because the customers' expectations are hard to anticipate and the evaluation of the customer satisfaction can be done only after the banking service is purchased. However, requesting constant feed-back during service providing is very helpful.

How a customer perceives the value of the banking product is directly related to customer satisfaction with the condition of meeting the expectations. This leads to a need of standardizing the service in order for the customer satisfaction conditions to be met.

When addressing to small companies, customer satisfaction standards are easier to identify, anticipate and design. For a medium company, for example, it is recommended to address a combination of standard features and tailor made ones. A banking service feature is designed and established through the document called product card (to be noticed that the concept of banking service was replaced by banking product. Any new product or modification of existing products is approved through this document. The product card contains all the standard features of the product and also details about the non-standardized approach (rules of approval, criteria to consider etc.).

Sometimes the same product card will be used in order to offer standard products to a specific segment of clients, while for other segments, the same product card will become a tailor made offer through applying the existing non-standard rules.

Another special feature of the SME banking product is related to the decision process.

The term of customer has in the end an individual person that will take a decision. That person could be an administrator, shareholder or general manager of the company. For bigger companies, the decision can be taken also by the Financial Manager. Even so, when appreciating the quality of the banking product, or when taking the decision of acquiring the banking product, the customer (individual decision maker) is influenced by his own experiences, claims and expectations; the influencers can be someone from the family (for example, if a family member had a similar experience with the same bank/ branch of a bank etc.), a business partner (client, supplier etc.), even subordinates (financial manager, accountant etc.) and other parties (brokers, consultants etc.).

Sometimes, situational factors influence the decision (for example lack of parking space in the proximity of the branch, no privacy and so on can lead to a negative decision).

While taking the decision to contract a loan, maybe the most important factor is the credibility and confidence inspired by the Relationship Manager. The explanation is simple: the financial situation of the company is important for any administrator/ shareholder (profit is source of dividends and so on) and the risk that a wrongly granted loan could destabilize the financial balance leads to the need of competent advice. That is why professionalism of the Relationship Manager (proven by very well knowing the products, understanding the business, financial indicators knowledge and so on) may also influence the decision.

In authors opinion, the decision is influenced by the ability of the Relationship Manager to inspire confidence, by:

- Very well knowing the banking product, with all its feature (including all costs)
- Understanding the business of the client and correctly identifying the need (a common mistake of low experienced Relationship Manager is offering a Working Capital line instead of an Investment Loan; experienced clients know very well that the company's financial situation can be seriously damaged if acquiring, for example, fixed assets with 5 years amortization, with a working capital line with maturity of 1 year)
- Continuously providing consultancy and advice
- Interactivity and relationship management; the clients need to be involved in the structuring of the banking product (when tailor made approach needed). Face to face meetings are a great premise for identifying further business opportunities for cross selling and future financing (for example, in the meeting, the client may mention a small detail regarding a future investment for building a new warehouse)
- The quality of the banking product cannot meet the clients' expectations unless the Relationship Manager demonstrates fairness; this approach needs to be part of organizational culture, as the values reflect in day to day activity
- Trained on soft skills development: communication, sales, negotiation etc. are a must
- Becoming a single point of contact with the client, "the bank is me"; high expertise and very well knowing the business, together with financial advice and well knowing to identify the needs, are the features that make a Relationship Manager become the face of the bank in front of the customer. That is why the entrepreneurship skills are also very important.

As a conclusion, the skills and know-how of the Relationship Manager might be defining for the decision taking regarding loan facilities. Knowing very well these aspects, the members of the marketing department could be very interested in applying the marketing strategies first of all by "selling" them to the Relationship Managers. The scope is very well illustrated in the figure below.

**Figure 3:** Marketing Strategy Leading to Commercial Results Increase

Source: *Personal Contribution of Authors*



### 3. Applying Segmentation and Designing SME Lending Strategies

#### 3.1. SME Lending – Characteristics

The loans are some of the most complex banking products, especially because the diversity of financial needs of the companies, but also because the approval process. European Commission (in Silivestru, 2012: 178) conducted a survey revealing that SMEs are highly dependent on bank loans for financing current activity and reaching their development ambitions.

From authors perspective, loans for SMEs can be categorized as follows: Working capital lines (Revolving facilities, the limit stays the same), with general expenses purposes (usually: payments to suppliers or state budget and so on); Working capital loans (Non-Revolving facilities, the limit diminishes while paying the principal), for financing current needs; Factoring Facilities, based on Assigned Debtors (no other collaterals requested); Discounting instruments (cheques and promissory notes, invoices); Investment Facilities (with different purposes: building a warehouses/ premises of the company, acquiring a fixed asset and so on).

Oncioiu (2012: 49) suggests that there are two significantly different concepts at the basis of the design and operation of financing scenarios for SME:

- Financing schemes based on governmental policies, with priority on some categories of SMEs;
- Financing schemes based on market requirements, with same or very close market conditions.

Each financing structure has one or more loans, each with limit and exposure (also called outstanding). The loan limit is the maximum limit amount which can be granted to the client (for revolving loans, this is the amount that appears in the loan contracts). The loan exposure (outstanding) is the amount utilized by the client at a certain moment. The limit is always above the exposure, the only case when the outstanding exceeds the loan limit occurs if the client didn't pay its debts to the bank, being in overdue.

The risk management is a very important feature of each loan. In general, small companies have higher risk than bigger ones, but a good rating is only given by a strong financial situation.

The collateral coverage is also a very well known feature of a loan; depending on the collateral type (mortgage, cash, contract, equipment etc.), a certain weight is applied to the value of the guarantee, so the coverage is usually  $\geq 100\%$ .

Rating and collateral structure and coverage determine the amount of the provisions that the bank needs to constitute for each loan. The provisions are costs (cost of risk, calculated as the percentage of the provision evolution applied to the amount of the exposure).

While calculating the profitability of a loan, there are three components: the interest rate and the fees paid by the client (IF), the funding rate of the bank (cost of

financing; F) and the cost of risk (as described above, CoR).

For calculation of the profitability of the loan, the authors are proposing the following formula:

$RL = IF - FC - CoR$ , where:

- RL = net Revenues generated through the Loan;
- FC = financing cost;
- CoR = Cost of the Risk.

### **3.2. SME Lending – Strategies**

Every banking product strategy follows at least three essential stages: the Design stage, the Implementation stage (which includes: the release itself, the testing – before and/or after the release – and the “technical” implementation) and the subsequent Monitoring (with the purpose of identifying the strengths or the possible optimization alternatives; sometimes it leads even to a radical strategy change).

The effort while designing a strategy is orientated towards the existing clients’ portfolio. This is widely accepted as being an efficient strategy, being less expensive than the strategy of attracting new clients. It is also profitable to simultaneously focus on various transactional segments. The portfolio selection (clean-up) and segmentation is applied for developing a model, taking also into account a perspective based on risk management - clients with less risk and high profitability are preferred.

Once the market segment/segments have been defined, the establishment of the crediting strategy target is made taking into consideration the potential of the chosen segment (which has to be large enough), but especially the possibilities of creating a special positioning, that will be able to generate a value proposition for the clients within the segment.

After establishing the target segment characteristics, the companies whose risk profile don’t meet the eligibility conditions will be eliminated from the database. The conditions will always include the company’s financial rating (based on the scoring developed by the financial institution), the debt service, the client’s profitability and so on.

A competition analysis is a mandatory step, especially when the target segment is composed of small companies. In this case, the strategy will be a standard one, generally available for all companies included in the segment. For larger companies, where a level of service personalization appears, the competition analysis becomes harder, reflecting through the clients who are willing to offer information regarding the offers which they received from the competing banking institutions.

The strategic alternatives when offering credit facilities may regard any aspect below, but the decision regarding optimal strategy could be taken at segment level:

- The market share increase, by increasing the number of clients with credits and/or the total volume of granted loans; if focusing on volumes, the segments with highest potential should be attacked.
- Optimized version/ new version or product to be included into the product catalogue of one or more segments; segments with low results and potential can be attacked by offering optimized products which meet their expectations.
- Client portfolio migration from credit products with a higher risk to credit facilities with lower risk and/or higher profitability (transforming the credits with work

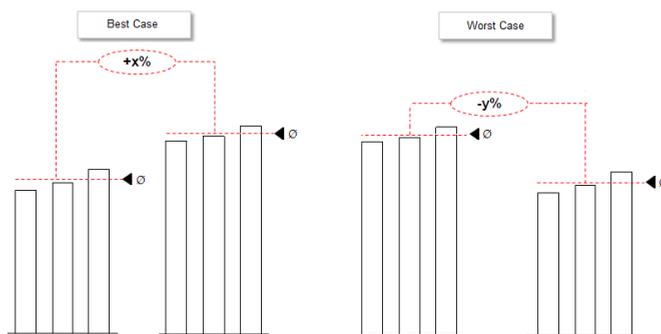
capital into factoring facilities, for which the default risk is lower); segments with high risk (sensitive portfolio) always need a special strategy and action plan.

- The creation of products and services “packages” (for cost optimizing); elite and complex segments can be attacked with innovative products which are leading to turnover increase through the bank (and therefore to non-risk revenue increase); for example, a package with unlimited incoming and outgoing payments and a lot of banking and non- banking benefits included, at a monthly fixed price.
- The establishment of loyalty methods for the existing clients/acquisition of new clients through a simplified flow of offering certain credit facilities (for example, preapproved facilities); segments with good financial performance and with loan appetite will be attracted through a pre-approved limit of money (working capital or credit card), granted by a very simple flow, with no bureaucracy.
- Encouraging certain favorable behaviors (the turnover increase through the current account, which leads to the banking institution’s profitability increase), by offering preapproved working capital lines (according to the client’s previous behavior)
- Some modifications of the existing products are mandatory due to legal rules (especially NBR Regulations, Available: <http://bnro.ro/Legislatie-financiar-bancara-735.aspx>).

Different strategic alternatives for each segment will be proposed, taking into account also the cluster specificities and the objectives that derive from the analysis. For profitable clients but without growth potential the optimal strategies are focused on retention; for unprofitable clients but with a high potential, the optimal strategy will consider the increase of the turnover through the bank, the increase of the product penetrating degree or the increase of the credit volume.

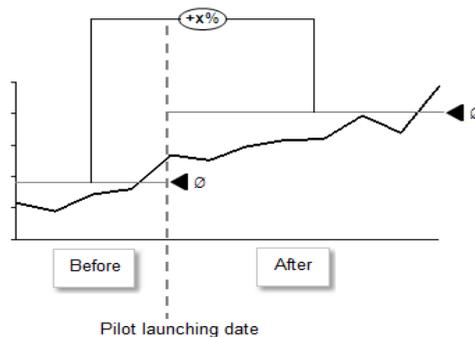
#### 4. SME Strategy Efficiency – Final Testing

Based on criteria defined in segmentation activity, and also through different scenario defining, final thresholds for each numerical criterion will be defined. In order to estimate the results of the marketing strategy, worst case and best case scenarios will be set up. An example for 3 months evolution is provided in the figure below.



**Figure 4:** Three Months Evolution: Best and Worst Case Scenarios (Estimations)  
*Source: Personal Contribution of Authors*

Usually, the final estimation for the strategy is somewhere in between worst and best case. The next step is represented by testing the matrix of criteria, which is usually made through a pilot (branch/ region/ indicated financial advisors, in a limited period of time). After the pilot period, a “Before and After” analysis should be performed, with the purpose of comparing the average (monthly/ quarterly) before launching to the average of the same indicator, but after launching. This is the final analysis, through which, the efficiency/ inefficiency of the designed segmentation is determined (as per the below figure).



**Figure 5:** Before and After Analysis of the Strategy Impact

Source: *Personal Contribution of Authors*

Depending on the strategy profitability and success, further analysis and monitoring of the segments will be done. Best Practices for sub segments may be identified, and, therefore, an optimization of the strategy could be done.

### Concluding Discussion

Considering the methods and strategies presented in the current paper, one can identify correlation and impact between portfolio analysis, market watch, best practice identifying, gathering feed-back (from best sales representatives and clients), analysing the clients profiles and the action plan (as a starting point) of an efficient segmentation process. In this respect, the defining of segments and sub segments may be based on different criteria identified as important during the previously mentioned analysis. If willing to determine if a segmentation structure (matrix) is efficient or not, business case scenarios could be tested. Tailor made strategies may be designed for sub segments by very well knowing the profile, characteristics and behaviour. This is why authors consider that segmentation has an important impact in finding the optimal marketing strategies and service model. SME specificity and characteristics may be found not only in Romania, but also in other countries and regions. Targeted products, behaviour similarities identification and profitability estimation could be done for clusters of companies all over the world. This is why, one can conclude that segmentation methods and strategies presented in the current paper could be applicable to any commercial bank, irrespective of country or region.

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- [online] National Bank of Romania <http://bnro.ro/Legislatie-financiar-bancara-735.aspx>

# THE EFFECTS OF AMBIENT SCENT ON CONSUMER BEHAVIOR: A REVIEW OF THE LITERATURE

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**Abstract** *The main purpose of this paper is to present an extended literature review of relevant empirical studies which examine the effect of ambient scent on consumers' perception, consumers' emotions and consumers' behavioral responses in the context of retailing. Compared with other atmospheric stimuli (such as background music), ambient scent has received little attention from researchers. This paper is also concentrated on identifying the principal dimensions of ambient scent (presence versus absence; congruity versus incongruity and pleasantness versus unpleasantness) and examined how these dimensions of ambient scent have an impact on evaluation of a product, of a store or of a shopping mall and their impact on shopping behavior within a store. The paper also presented the Gulas and Bloch (1995) model, a complex conceptual framework on the influence of ambient scent on consumer responses, in their model the authors introduced the influence of mediating factors on behavioral responses to scent. Their model is a first step on the understanding the role of ambient scent in influencing consumer behavior. Davis, Kooijman and Ward (2003) extending and elaborating the Gulas and Bloch (1995) model by introducing concepts from cognate disciplines and examines mediating factors that help shape the emotional and behavioural responses that are stimulated to encompass current research on human olfaction and brings another specific points for future research. Based on the results of the relevant studies the authors of the present paper concludes by identifying gaps in the literature and suggest future research to explore how the use of scent help to create an overall store atmosphere which influence shopping behavior in the context of retailing.*

**Keywords:** *ambient scent; store atmosphere; consumer behavior; consumer perception; consumer emotion; retail stores.*

**JEL classification:** *M31, M39*

## 1. Introduction

Many retailers have long used ambient scent to influence consumer cognition, emotion and behavior. The notion that ambient scent can be used to influence consumer behavior is derived from the concept of atmospherics. The impact of store atmosphere on consumer behaviour has widely been considered in research over the decades (Kotler, 1973; Turley and Milliman, 2000). Numerous atmospheric stimuli were investigated by researchers including music (Bruner, 1990; Milliman 1982, 1986; Yalch and Spangenberg, 1990, 1993; Herrington and Capella, 1996; Dube, Morin 2001, Morin, Dube, Chebat 2007), color (Belizzi, Crowley, and Hasty 1983; Crowley 1993), lighting (Areni and Kim, 1994) crowding (Harrell and Hutt 1976; Hui and Bateson, 1991) and window displays (Sen, Block and Chandran, 2002, Oh

and Petrie, 2012). Referring to the ambient scent, this can be considered an underdeveloped aspect of the store environment because only a few atmosphere related studies have considered the role of ambient scent and its impact on consumer behaviour (Chebat and Michon, 2003; Turley and Milliman, 2000). The body of the literature based on the impact of ambient scent can be considered somehow as fragmented, some of the earlier research were concentrated to examine the effect of scent in terms of products or brands evaluation (Bone and Jantrania, 1992; Mitchell, Kahn and Knasko, 1995; Morrin and Ratneshwar, 2000) others in terms of stores evaluation (Spangenberg, Crowley and Henderson, 1996) and more recently researchers have concentrated on the effectiveness of ambient scent in retail store and shopping mall settings (Hirsch, 1995; Knasko, 1995; Mattila and Wirtz, 2001; Chebat and Michon, 2003; Michon, Chebat and Turley, 2005). The results of these studies reported ambiguous findings and shortcomings of measurement approaches as can be seen in the next part of this paper.

## 2. Literature review

Ambient scent have not gain so much attention as other atmospheric stimuli. Spangenberg, Crowley and Henderson (1996:67) defined ambient scent as "*scent that is not emanating from a particular object but is present in the environment*". Wilkie (1995) noted in his seminar work that scent as one of the five senses is considered to be the most closely attached to emotional reactions because the olfactory bulb is directly connected to the limbic system in the brain, which is the seat for immediate emotion in humans, so smell perception and interpretation is a complex phenomenon that involves a mixture of biological responses and psychology. This is one of the main reason why odor in a retail environment is important to study as an atmospheric stimulus because scent enhanced likelihood of producing an emotional reaction from consumers (Michon, Chebat and Turley, 2005).

A review of the literature of the studies on the effects of scent on consumer behavior allow us to understand that in-store scent have concentrated on three dimensions: the first dimension is *scent congruity* with the products sold in the store (Bone and Jantrania, 1992; Mitchell et al., 1995; Mattila and Wirtz, 2001). The second dimension is *presence of a scent*, prior research had demonstrated that simply having a scent present may result in affective or behavioural responses (Spangenberg et al., 1996; Morrin and Ratneshwar, 2000). The third dimension is *scent pleasantness*, prior research reveals that having a pleasant scent may result in positive affective or behavioural responses, whilst having an unpleasant scent may result in negative affective or behavioural responses (Mitchell, Kahn and Knasko 1995; Bone and Ellen, 1999; Morrin and Ratneshwar, 2000). Some of the prior studies on ambient scent (Spangenberg, Crowley and Henderson, 1996; Morrin and Ratneshwar, 2000), have tended to look at the pleasantness of the scent, ignoring any association of the scent with the store. As Gulas and Bloch (1995) pointed out, the scent of flowers may be generally perceived as pleasant, but totally inappropriate for a motorcycle shop.

### 3. The effects of ambient scent on product and store evaluations

Prior research reveals that *pleasant odors* influence feeling states, evoke associations from memory, and affect product judgments (Cox, 1969; Hirsch, 1990). Cox (1969) show how odor aroma can influence product sold, they demonstrated that nylon stockings with an orange odor sold better than unscented stockings. Subjects of the study associated smell with the product quality, they felt that the scented stockings were of better quality than the unscented ones. Knasko (1989) suggest that ambient aroma had an influence on the amount of time consumers spent at a jewelry counter. Hirsch (1991) demonstrated that respondents were more likely to purchase Nike shoes in a perfumed room rather than the same shoes displayed in an identical but unodorized room. The results of these earlier studies suggest that the *effects of odor* is associated to its *pleasantness or unpleasantness*. Based on these studies Bone and Jatronia, (1992) states that consumers are influenced by *pleasant odors* which are pleasant experience, which, in turn these pleasant experiences create a mood or an overall feeling, which makes the product as being judged. They conducted an experiment and the findings suggest that product evaluations are enhanced when are scented, the primary olfaction effect is on overall product evaluations rather than the attribute belief level. Congruent scents tend to improve evaluations more than incongruent scents (Bone and Jantrania, 1992).

Morrin and Ratneshwar (2000) investigated the effects of ambient scent on evaluation, attention and memory for familiar and unfamiliar brand, they exposed respondents to familiar and unfamiliar brand names, in a *pleasantly scented* environment or no scented environment and evaluated how much time spend respondents to evaluate each brand through a computer recorded. They demonstrated that a pleasant ambient scent for unfamiliar brand names increased attention and memory also improved evaluations primarily rather than for familiar brand names. Morrin and Ratneshwar (2003) continued their work and examined the relationship between scent congruity and brand memory. The first study tested participant evaluations of images of household cleaner and personal care/toiletries in a scented (geranium and clove) or unscented environment. The results indicated that a pleasant scent with the product category increased subjects'attention to brand stimuli, ambient scent improved consumer memory for familiar and unfamiliar brands as assessed by recall and recognition measures. The impact of congruent and incongruent ambient scent was the same on brand recall and brand recognition (Morrin and Ratneshwar, 2003). In the second study was studied how the presence of ambient scent during both encoding and retrieval phases may be critical based on two different factors. The results reveals that brand memory was affected only by the presence of ambient scent at the brand encoding stage and substantially increased attention. Brand recall or brand recognition was not affected by ambient scent at the brand retrieval stage (Morrin and Ratneshwar, 2003).

Mattila and Wirtz (2001) examined the effects that *pleasant ambient scent* and *pleasant background music* on customer evaluations of a store's environment. They consider three situations of scent and music (no music/scent, pleasant low arousal music/scent and high arousal music/scent). The results of the study reveals that when ambient scent (low and high arousal) and ambient music (low and high arousal) were congruent with each other a positive interaction effects on approach behavior, pleasure, satisfaction and store evaluations were found. Spangenberg,

Grohmann, Sprott, (2005) examined the effects of *ambient scent* and background music on consumers' evaluations of a store, its environment and offered merchandise. The results of the study show that a consistence between ambient Christmas scent and the presence of Christmas music (as compared to no scent and Christmas music) means more favourable store attitudes, stronger intention to visit the store, greater pleasure, arousal and dominance and a more favourable evaluation of the environment.

#### **4. The effects of ambient scent on consumer perception**

Mitchell, Kahn and Knasko (1995) examined the effects of *scent congruity and incongruity* on cognitive variables that are involved in the consumer decision making processes. The results reveals that pleasant ambient odor influence consumer decision making, congruent odors lead to a greater access to congruent attitudes, autobiographical memories, thoughts regarding prior experience with the product class and product class knowledge. Incongruent scents may determine cognitive interference. Scent congruity condition resulted in more time spent in decision-making and increased distribution of decisions across product choice groups in each product category compared with scent incongruity. Chebat and Michon (2003) found that ambient scent is used directly to build a favorable perception of the mall environment and indirectly for product quality. Since odors may affect mall perception, retailers should consider that citrus scent as a powerful way of influencing product perception. Perception of the mall environment affects shoppers' arousal very strongly, whereas perception of product quality has very little impact although it is significant on emotions (Chebat and Michon, 2003).

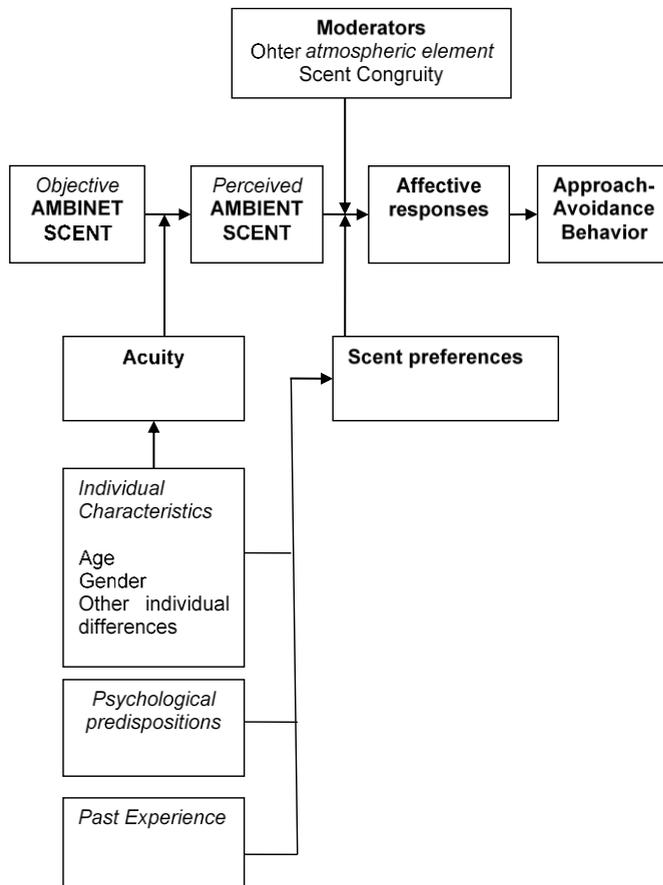
Michon and Chebat (2004) studied the effects of background music and ambient scent on shopper's perception of service quality in a mall atmospheric context. The results show that ambient scent, background music have no direct effect on consumers' perception of service quality, these variables act as mediators rather than moderators of service quality. Michon, Chebat and Turley (2005) examined the effects of ambient odors on shoppers' emotions, perceptions of the retail environment and perceptions of product quality under various levels of retail density in the context of shopping mall. The authors combined moderating effects of ambient scent and retail density which are measured on shoppers' positive affect and on their perception of the mall environment.

#### **5. The effect of ambient scent on consumer behavior**

Numerous studies has demonstrated that ambient scent influence consumer behavior. Hirsch (1995) examined if the effect of the *presence of a pleasant scent* on the amount of money gambling on slot machine in Las Vegas casino, odorized with different aroma over a period of time. The author reveals that the presence of a particular scent increased slot revenues produced in one area of the casino, while a section of the casino that was treated with a second scent and a section of the casino that remained unscented were not observed any significant change in revenues. Knasko (1995) examined the effect of *ambient olfactory stimuli* on approach behavior, mood and perceived health. The results suggest that when individuals were exposed to the pleasant ambient odors had certain effects rather than no odor (longer looking time, better mood and lower hunger ratings). These findings are consistent with prior reserch which show that pleasant environments can improve

mood and increase various types of approach behavior (Knasko, 1989; Ehrlichman and Bastone, 1992).

Gulas and Bloch (1995) develop a model on the influence of ambient scent specifically as an environmental cue on emotional responses and shopping behaviors. Based on the literature from several disciplines, scent was demonstrated to be relevant to consumer behavior in two forms: on the one hand, scent can be directly associated with an evaluation object while on the other hand, scent is part of the overall ambient environment. The model proposed by the authors (see Figure 1) is congruent with other models of environmental effects developed earlier on the work of environmental psychologists (Mehrabian & Russell, 1974; Bitner, 1992). Scent preferences in combination with consumers' perceptions of ambient scent influence affective responses. Between perceived ambient scent and affective responses can be seen potentially significant moderators. Affective responses to ambient scent are expected to result in approach or avoidance reactions relevant to the consumption situation. Gulas and Bloch (1995) model is one of the first steps in developing and understanding a specific consideration of ambient scent perception.



**Figure 1: The Model of the Influence of Ambient Scent on Consumer Responses**

(Source: Bloch and Gulas, 1995:90)

In a study conducted by Spangenberg, Crowley and Henderson (1996) were tested the effect of adding a *pleasant ambient scent* to a simulated retail environment. The authors want to find whether the presence of an inoffensive ambient scent (scents as being either pleasant or neutral) versus no scent affects evaluations influence approach/avoidance behaviors in a retail environment and whether this impact varies according to the affective nature and intensity of the ambient scent. The results of the study demonstrated that the presence or absence of a scent significantly affected evaluation of the environment and subjects evaluations of the products but weaker effects to product judgement. Subjects in the scented conditions did not actually spend significantly less or more time in the store than subjects in the unscented condition, the time consumers spend examining merchandise, waiting in lines, or waiting for help may be perceived themselves as having spent less time there than it actually is by introducing ambient scent into the environment. More specifically odors in the store environments may be perceived as part of the store atmospherics. The results of the tests suggested that only one of three product evaluations appear to be affected by the scent.

Bone and Ellen (1999) defined three dimensions of the odor which are considered to be important: the presence (or absence) of smell; pleasantness of smell and the congruity of smell with the object studied. The authors reveals that smell influence respondents in relation to: elaboration, as defined from both discursive and image-processing perspectives; affective and evaluative response; purchase and repeat visit intention; behavior in terms such as time spend and decision making. Bone and Ellen (1999) suggest that researchers have to examined whether odor effects on affective and behavioral outcomes are direct or are partially or fully mediated by mood state, cognition and other variables.

Ward, Davis and Kooijman, (2003a) examined the linkage between the research conducted in various field of scholarship and its potential application in retailing using the model developed by Gulas and Bloch (1995) and introduce other considerations that might be useful to increase the model focused on issues of totality and congruity. The authors consider that ambient smell is a stimulus which lead consumers to develop a holistic impression of the store which can be consider its atmosphere which links to the notion of retail identity, retail image and consumer behavioral responses in terms of approach and avoidance behavior (Ward, Davis and Kooijman, 2003a). The holistic impression of a store helps retailers to develop a clear, consistent and coherent brand identity that is communicated and vested in the store itself, and the understanding on the importance of the use of smell in this process it is very important (Ward, Davis and Kooijman, 2003a).

Davies, Kooijman and Ward (2003b) extending and elaborating the Gulas and Bloch (1995) and introduces in their paper the ability of smell to communicate a "sense of place" and its potential as a differentiator in crowded marketplace. Compared with original model proposed by Gulas and Bloch (1995), the extending model implied important issues for researchers and retailers such as (Davis, Kooijman and Ward 2003b: 622): smell can be perceived through pre-attentive processing, this means that in some situation consumers respond to a smell without realizing; scent memory provides retailers with a mechanism for triggering memories of emotions; when such emotions are pleasant, appear facilitates the development of a "bond" between retailer and researchers; cultural background must be incorporated to the model to reflect the potential importance of group membership on individual characteristics

and preferences; ambient scent is one of the important stimuli which lead consumers to development a holistic impression of the store; the notion of holistic impression can be linked to the creation of a: "sense of place" where smell has a potential to act as place-marker in this context; psychological state is one of the most important intervening factor in scent perception and interpretation which was not incorporated in initial model proposed by Gulas and Bloch (1995). The model proposed Davis, Kooijman and Ward (2003b) recognized the need for future research which will examine the extensions of elaboration model proposed by Gulas and Bloch (1995). Spangenberg et al., (2006) examined evaluative and behavioral effects of congruity between the perceived gender of an ambient scent and a store's gender-based products. They investigated customers' responses to an congruent versus incongruent scent between the gender-based product offerings and the perceived femininity or masculinity of ambient scent in a clothing store. The results reveal that the presence of an ambient scent congruent with gender-based products influence shoppers to evaluate the store and its merchandise more favorable, shoppers are more likely to exhibit approach behavior in comparison to an incongruent scent. These results were obtained when other store factors (price or advertising) were held constant. (Spangenberg et al., 2006). Also the presence of a gender congruent scent increases the majority of approach behavior in an actual store including money spend. This study is the first published study which demonstrated the effects of varying scent on actual sales. The results of the actual study extend prior research (Spangenberg, Crowley and Henderson 1996) showing that beyond merely incorporating ambient scent it is important to managers to identify gender preferred or gender congruity scent in their store environments. Parsons (2009) noted that some of the earlier studies on scent (Spangenberg, Crowley and Henderson, 1996; Morrin and Ratneshwar, 2000) on the effects of ambient scent tended to look at the pleasantness of the scent, and does not consider any association of the scent with the store. Parsons (2009) analysed whether an associated scent differs from a non-associated scent on its effect on customer liking for the store and consumers' behavioural intentions regarding the store. In this way, the author chose three generic store-types (bookstore only new books; a lingerie store; white-ware appliance store) that were unlikely to have product specific scents. Each respondent view the video of a store, then was measuring affect and behavioural intention. The results reveal that for the store which is odourless, the use of an associated ambient scent will have a strong positive effect on shopper liking for the store. While for all three store categories the presence of a non-associated scent has a negative effect on affect of the store. These results are consistent with prior research (Mitchell, Kahn and Knasko, 1995; Bone and Ellen, 1999). The no scent scenario also has a negative effect on affect, these findings are contrary with prior research (Spangenberg, Crowley and Henderson, 1996; Morrin and Ratneshwar, 2000), which suggested that merely having a scent present may have positive effects, but the results of this study suggest that the absence of scent may have negative effects, rather than the implied null effect suggested by the Spangenberg, Crowley and Henderson (1996) study and that the scent present needs to be one associated with the store type (Parsons, 2009). The effects of scent on purchase intent were found that for the book and lingerie stores the presence of a non-associated scent has a negative effect, whereas the no scent option (congruent) has no effect these results are consistent with Ellen and Bone's (1998) findings. Presence of an

associated scent has a significant positive effect on intention (Pearsons, 2009). The results of the field study was not necessary convincing but reveals that the results of experiment findings have reasonable validity. Scent with other atmospheric stimuli can be use to create an attractive store environment to shoppers. The Pearsons' (2009) study reveals that for a normally odourless store an appropriate scent in the form of an associated scent can enhance shopping behavior.

In a real retail setting of young fashion shoppers Morrison et. al. (2011) examined the effects of music (high/low volume) and aroma (the present/absence of vanilla scent) on customers' arousal and pleasure levels and how these affect approach/avoidance behaviour in term such as time spent in store, expenditure levels and customers satisfaction. The results of the study reveals that music volume and the presence of aroma have a significant effects on shoppers' emotions and subsequently influence shopper behaviors and satisfaction level. More specifically arousal induced by music and aroma results in increased pleasure levels which affect positively shoppers behaviors in terms of money spend, approach behavior satisfaction and overall staisfaction. Teller and Dennis (2012), conducted a field experiment in a regional shopping mall to examine the *effectiveness of ambient scent*, the results reveals that ambient scent did not affect any observed or surveyed variable on consumer behaviour no matter which experimental design was simulated. These results are not consistent with prior research (Hirsch 1995; Knasko 1995; Mattila and Wirtz 2001; and Spangenberg, Crowley and Henderson, 1996)

## **6. Discussions and future research**

Scent as other atmospheric stimuli influence consumer behavior in terms of cognitive, emotional and behavioral responses in retail setting and service environment. Turley and Milliman (2000) noted that smell did not received sufficient attention from the researchers as deserved, recently numerous researchrs examined the effect of scent or interaction between ambient smell and background music on consumer behavior in retail store or shopping mall. If earlier studies were concentrated more on the effects of scent on product evaluation (Bone and 1992) and brand evaluation and association of scent with product sold (Cox, 1969; Hirsch, 1990; Bone and Jantrania, 1992; Mattila and Wirtz, 2001) recently researchers recognized the influence of smell on cosumers' perception or shopping behavior in fashion store or shopping mall (Spangenberg, Crowley and Henderson, 1996, Chebat and Michon, 2003). Gulas and Bloch (1995) observed that the scent of flowers may be generally perceived as pleasant, but totally inappropriate for a motorcycle shop. The Pearsons' (2009) study reveals that for a normally odourless store (electronics store, stationery shop, fashion outlet, or bookseller) an appropriate scent in the form of an associated scent can enhance shopping behavior.

The model proposed by Gulas and Bloch (1995) was one of the first step in developing and understanding a specific consideration of ambient scent perception even if the authos request additional research on smell, specifically in the context of retail environments, not so many researchers try to test their model. Ward, Davis and Kooijman, (2003a) organise their work trying to cover these ares which did not fully developed in Glas and Bloch's (1995) framework starting with those focused on issues of totality and congruity. Davis, Kooijjan and Ward, (2003b) contentrated their work on the use of ambient scent in the retail environment and examined the mediating factos that help shape the emotional and behavioural responses that are

stimulated. Bone and Ellen (1999) proposed a model for conventional wisdom view of odor which influence approach/avoidance behaviors, altering mood state and affecting elaboration. As can be observe non of these studies did test the model proposed in a filed experiment in retail store or in mall environments.

The authors of present study identified some studies on interaction between ambient scent and background music (Mattila and Wirtz, 2001; Michon and Chebat, 2004; Spangenberg, Grohmann, Sprott, 2005; Morrison et al. 2011) future research have to consider the influence of more interior variables (music, scent, color, lighting; crowding) on their impact on shopping behaviour. These studies reveals that scent influence consumer behaviour in terms such as : perceptions of the store, mood, pleasure, arousal, time spend in store, money spend in store, approach avoidance behaviour. A lack of studies are identifies on the influence of ambient scent in service environment or in online environments we identified only a few studies on the effect of scent in services for example Guenguen and Petr (2005) examined the effects of ambient scent on consumer behavior in a restaurnat. Vinitzky and Mazursky (2011) exmined the effect of the iteration between cognitive variable and the presence of scent on online search motivation purchase characteristics, and telepresence.

In the majority of previous papers were investigated the influence of scent on consumer behavior and exclude the impact of scent on employee bahaviour, future researh can consider this and also the importance of factors which moderates this relationship. Our purpose for future research is to develop a framework on the effect of ambient on shopping behavior in clothing store and mentioned the importance of moderators in this relationship.

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## GLOBAL COMPETITION AND ROMANIA'S NATIONAL COMPETITIVE ADVANTAGE

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**Abstract:** *Analyzing products and services around us it is clear that most of them are the result of production factors, labor and capital becoming more international and increasingly less and less national. We are witnessing the globalization of markets and production, to a large global integration and interdependence, increase personalization of production and services as a result of new communication systems interaction and flexible production processes. Markets will continue to homogenize and diversify at the same time, so it is important that as a global marketer one addresses a market segment defined by income, age, and consumption habits and not by membership of a nation. The most visible and polarized is the premium segment fighting for high income clients where brand value plays an important role. Instead identification of large segments of customers offers the advantages of scale economy in production and marketing for global enterprises. Consumer profile is the dominant global consumer requesting and accepting global products and services easily. In fact, what can force an economic alignment to achieve the best performance, rather than the global consumer. The research methodology used includes literature review, comparative analysis, synthesis of data based on bibliographic resources and official documents. The aim of the paper is to highlight current models that underlie the competitive advantage of nations and assess the competitive advantage of Romania in the context of the global market. A case study is used to offer an overview of competitive advantage of Antibiotice Iasi SA, a competitive player, in a global pharmaceutical market with strong global competition. Countries moderate companies' achievements of global efficiency objectives due to the countries' rivalry. Romania has to understand that it is in competition with other countries in order to fulfill economic, political and social objectives. The scope in the end is the well-being of a country's people.*

**Keywords:** global competition; globalization; productivity; competitiveness; competitive advantage

**JEL classification:** M30; M31; M39

## **1. Globalization and Global Competition**

Global competition is a reality whether we are willing or not to accept it. Globalization and hence global competition is supported by the development strategy of multi-and transnational companies, governments, international organizations and consumers. Goods and services around us are the result of interaction and integration through trade, capital and labor flows, technology becoming more and more international and increasingly less national. We have today economic actors that are global from their appearance given new experiences of communication. We live in the time of digital economy based on relationships, networks and interaction (Gummerson, 2008). The new realities of the contemporary world resizes international relations and lead to the crystallization of a global economy based on networks (Bari, 2010) by translating the classic foreign trade interdependencies in a system that acquires planetary vocation. Models of multilateral negotiations take gradually instead of bilateral, not only politically but also in the economic (Malița, 2007). Moreover, contemporary economic negotiations call for a much greater extent to ensure success: empathy, creativity and partnership spirit, three distinctive features of relationship marketing (Schebesch, Pop, 2013). From this we can conclude a direct connection between relationship marketing and the globalization. Extending relational marketing approach within strategic alliances (Mâlcome, 2013) by changing the competitors in associates is perhaps the best example.

Technology is one of the main proponent of globalization, and companies are required to keep pace with new technologies and adapt to new consumer trends required. Depending on activity sector forces of the company that favor "global integration" are: capital-intensive production, homogeneous demand, as opposed to 'national adaptation' generated by local standards and barriers, strong local preferences (Kotler, 2008). We are in a phase of global development cycle that is not turning back and follows steps that strengthen global assertion of economic agents. Globalization on the market of material goods opens perspectives by differentiation through attaching specific services. The best example is that of smart phones and their specific applications. Business growth is ensured by covering new markets or better coverage of existing markets. We are seeing an acceleration of acquisition processes and partnerships among global players who thus have access to markets, technology, work processes and utilize the advantages of experience, economy of scale, resource utilization and overall strategy. Global integration is supported by: free trade agreements, new interaction in communication systems, flexible manufacturing processes, consumer preferences, transport optimization, all based on the latest economic trends worldwide.

Global economic environment changes constantly. Today the new triad in international trade is based on relations between Western Europe, extending eastward, the U.S. with Mexico and Canada and last but not least Japan and Pacific countries, hold 86% of global trade (Pop et al., 2011). The largest share of international exports is owned by intraregional trade, and between European countries is developing the third of world exports.

The study "How Global Brands Compete" (Holt et al., 2004) confirms that the choice of global brands is related to three dimensions: quality signal, global myth and social responsibility. The same study shows that only 13% of consumers prefer to avoid transnational companies and therefore are reluctant to consume global goods and services.

Globalization allows consumers to choose the most demanded products and services that the world has to offer, and companies choosing the best suppliers. In fact, what can force an economic alignment to achieve the best performance, rather than global consumers? How can one keep near a global client if the trader is not ready to understand his expressed and potential needs? What competition may be more beneficial than the global one to amplify internal performance and to stimulate the development of better products and services?

Multinational companies require three kinds of specialist – business managers, country managers, functional managers – and a set of senior executives to nurture the specialists and coordinate their efforts (Bartlett, Ghoshal, 2003). Global business management involves identifying appropriate human structures capable of standardization required by the company to adapt its advantages to important local consumer preferences. The organization of global leaders is flat and simple rather than complex and branched. Simple structures increase the speed and clarity of the information and allow focus of energy and valuable resources on innovation and learning and less on control, monitoring and reporting (Keegan, Green, 2013).

The aspects of the globalization that directly affect international firms include (Bradely, 2005):

- New information and communication technologies that enable the firm to go global – a key role for the Internet
- Communication technology that integrates suppliers into their customers business process and consumers lifestyles
- Information about information that is becoming a key source in the firm
- Growth of non-profit businesses in international markets
- Call for more ethical and social responsibility among international firms
- Emergence of a global culture based on music, clothing and entertainment
- Influence of global branding incorporating services and products

Markets will continue to homogenize and diversify at the same time, so it is important that as a global marketer one addresses a market segment defined by income, age, consumption habits and less through membership of a nation. The most visible and polarized is the premium segment fighting for high income clients where brand value plays an important role. Relevant examples are brands like: Hermes – famous fashion brand, an iconic status among men of a certain income, Mont Blank – luxury watches, writing instruments, jewelry & leather, Hennessy – means know-how, cellar, blending, aging, standards for cognac; Louis Vuitton – world leader in luxury, Prada - one of the most innovative fashion brands, capable of re-defining the norms and setting new trends. Instead identification of large segments of customers offers the advantages of economy of scale in production and marketing for global enterprises. Examples are: IBM – a globally integrated company operating in over 170 countries, being world's largest IT and consulting services company, Apple and Samsung as world's largest information technology companies, Hewlett-Packard the world's largest PC vendor by 2012 unit sales.

Many companies outsource all their manufacturing to become research and development and marketing firms where the brand gives the value of the company, e.g. 3M, Zara, Nike, Levis, Adidas.

Globalization is not a process exclusively attributed to the end of the second millennium. The roots were starting from the first industrial revolution. But what

distinguished by its contemporary form and content can be summed up in (Bari, 2010):

- the extent to which it unfold (the process covered the entire world now);
- support provided by technical progress, based mainly on communication cyberspace, miniaturization and other consequences of revolution generated by information technology;
- pace of change, generating dynamic exponential developments

## **2. The national competitive advantage**

National competitive advantage occurs when a nation creates more value than other competing countries by cost, speed of response, quality and innovation. Competitive advantage of a country is based on native values and connotations which add values and connotations acquired by the nation during the time. National or regional approach in achieving competitive advantage increases the chances of sustained success versus at the individual company approach. Today the nations and corporations must find new and creative ways to organize themselves. The need to be cost-effective, customer-oriented, to deliver the best quality are some of the realities of the present. In a highly competitive environment of today there is a need for flexible structures in an effective and efficient system of relationships. As Henry Mintzberg well noticed to Michael Porter effectiveness lies in strategy, while for Tom Peters what matters is the operational - with excellent execution of any strategy.

Competitive advantage occurs when there is a match between distinct competences of the company and the critical factors for success in an industry. Any superior fit between company skills and customer needs, allows the company to perform above the level of competition. Competitive advantage can be achieved in two ways. First, the company can address a low cost strategy which gives the possibility to offer products at lower prices than the competition. Secondly, the company may adopt product differentiation strategy that allows customers to perceive unique benefits, often accompanied by a premium price.

Ultimately the customer perception decides about the quality of the company's strategy. Performance of the organization, such as sales and profits depend on the psychological value created for clients. Finally, who creates more value than the competition, has competitive advantage and customer perception defines the value (Keegan, Green, 2013). Strength of a nation lies in the definition, construction and development of values that create competitive advantage. Today we are speaking about the concept of country brand that is used as a shortcut by stakeholders in their assessment.

The support of the development of national competitive advantage is given according to Porter to the presence or absence of particular national characteristics and less on the ability of the companies to create key competences and competitive advantage. Porter further grouped these national advantages in a diamond made of: factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry. Two elements are added to this framework: chance (exogenous influences) and government as a major determinant of national competitive advantage (Porter, 1990). The national diamond is not exogenous to the company. On contrary, companies have to upgrade their home actively by amplifying their home-base advantages and offsetting home-based disadvantage (Van Den Bosch, Van Prooijen, 1992). The influence of national culture on the competitive

advantage of nations is given too little attention in Porter model. Porter's diamond has to be combined with the dimensions of national culture found by Hofstede. After a thorough research project into the influence of national culture within a particular multinational company including 50 countries, Hofstede developed a model that identifies four primary Dimensions to assist in differentiating cultures: Power Distance - PDI, Individualism - IDV, Masculinity - MAS, and Uncertainty Avoidance – UAI. Then added a fifth Dimension after conducting an additional international study with a survey instrument developed with Chinese employees and managers, for that dimension, based on Confucian dynamism, is a long-Term Orientation. Operating across borders demands people who are intercultural savvy so that they can turn international approach into great success.

Some researchers like professor Rugman consider that success of firms based in small economies such as Canada comes from the "diamonds" found in a particular set or combination of home and related countries. Canadian managers have to look to a "double-diamond" and assess the features of both Canada and the US when formulating corporate strategy. Generally speaking it is necessary an approach beyond the nations to the region or to sets of closely linked countries. The same situation is for a country like Romania based in EU space. Howard Davies and Paul Ellis consider in the Journal of Management Studies that nations achieves sustained prosperity without becoming innovation driven and note the absence of strong diamonds in home bases of many global industries.

### **3. Romania's competitive advantage and globalization**

Opportunities appear with global players and besides global players. Romania's economy is subordinated to the global economy and must accept that opportunity derived from the degree of integration in the global economy flows. Our chance is to play successfully in the area of execution partners for global leaders (mostly Europeans) and not as global leaders. After this stage of existence as successful partner for global leaders, we can think that we will see the emergence of global leaders having as basic nation Romania.

Western Europe is the leader in technology and will continue to invest in Eastern Europe and implicitly in Romania. Technology transfer occurs through direct investment in manufacturing but also in research and development. These investments develop clusters and networks (Tantau et al., 2011) that can be considered a catalyst in industrial development and competitive advantage, speeding up the creation of firms and jobs and thereby contributing to growth and prosperity. There is a strong concentration of R&D spending in the world. The first three sectors - pharmaceuticals and biotechnology, technology hardware and equipment, and automobiles and parts - represent 51.7% of total R&D expenditure in the EU. In Romania the first three sectors with the largest investment in R&D are the automotive, chemicals and electrical equipment fields. Romania's economy is characterized by the prevalence of low and medium-technology sectors, with a weak demand for knowledge and an underdeveloped innovation culture. Romania is ranked by European Commission in "Innovation Union Scoreboard 2013 Report" as a modest innovator. More than this Romania has the lowest R&D intensity in the EU and a very low level of business R&D activity. For full picture of poor innovation, the Global Competitiveness Report 2011 classifies Romania as efficiency-driven (together with Bulgaria), all the rest of the EU economies being either in transition

to, or already in the innovation-driven stage. According Porter's diamond for Romania due to the efficiency-driven stage the competitive advantage comes from factor conditions for a nation that is not prosperous and salaries are relatively low in EU space. Even if the crises affect dramatically Romania, in the same time appears the chance to take the advantage of the price oriented consumer attitude. Dacia is one of the most visible examples which are successful competing on cost achieved through wages, scale economies and best practices in manufacturing. Dacia competitive advantage and success of today is sustained by demand conditions and firm strategy, more than basic factor conditions.

#### **4. Case study – SC „Antibiotice” Iași SA**

To understand the competitive advantage we stopped at the Romanian pharmaceutical sector and more specifically the company named Antibiotice S.A.(ATB). ATB was founded in 1955 and manufactures over 150 medicines, used for the treatment of several diseases (infectious, dermatology, cardiovascular, digestive and musculoskeletal). Listed on Bucharest Stock Exchange since 1997, the main shareholder is the Romanian Government (53%). The turnover rose at compound annual growth rate of 10% during the period 2003 - 2012. During 2012 the turnover rose by 7.9% yoy to RON 297mn, the operating revenue increased by 6.4% yoy to RON 327.5mn, while the operating expenses rose by 4% yoy to RON 292.7mn, due to the evolution of the raw materials expenses (up 17.4% yoy) and of the depreciation & amortisation (up 17.2% yoy). Due to this the operating result increased to RON 34.8mn. From the financial operations ATB had a loss of RON 2.3 mm in 2012. The net profit rose by 33.2% yoy to RON 27.4mn.

Over the past years ATB focused on the internationalization. The volume of exports rose from USD 13.2mn in 2009 to USD 20mn in 2012. ATB is the second important producer of Nystatin at international level, with a global market share of 35%.

ATB issued a press-release announcing that in Dec'12 – Jan'13 the company has passed the fourth FDA mandatory inspection for the drug producers distributing on US market with favorable outcome. At the same time two important drugs distributors in USA have audited the quality of ATB injectable powders flux in order to conclude commercial contracts with the Romanian producer. According to the company's management, the FDA favorable inspection result consolidates ATB's position on US market and facilitates the expansion on new markets such as Australia, Canada, South America and South Africa. Currently ATB

exports on USA the active substance Nystatin and Ampicilin injectable powder in four concentrations. Additionally ATB is expected to initiate the export of Nafcillin in two concentrations on US market during Q1'13. According to the management, ATB exports sales are expected to grow by 17% this year can due to its network of over 100 distributors in 60 countries. ATB is a success story in terms of internationalization of its products in the global market and has a huge potential development that can be harnessed by accessing markets of the American and African continent.

As a conclusion for ATB, we have to change our mindset in approaching the competitive advantage of Romanian pharmaceutical industry, being a believer in our creative intelligence based on the existing culture and tradition in the field generated by schools of I. Cantacuzino, V. Babes, N. Paulescu or A. Aslan.

For ATB is mandatory to have a clear understanding of global trends:

- Research and development is now about networking, sharing and partnership. The open innovation concepts promote collaboration within the industry, government agencies, private organization and academic field with the scope to resolve major medical and public health issues.
- Strategic international alliance grown as importance over the years and become a competitive strategy in global marketing management
- Create strong culture inside of the company which support excellent valorization of specialists of the company
- A better capitalization of the countries permeable to Romanian exports, even if we talk about EU and non-EU countries.
- An aggressive marketing campaign in preparing and supporting the market launch of new pharmaceutical products for which the company wants to be competitive at the international level

## **5. In conclusion**

Romania has the opportunity to be in the European Union, with the exceptional possibilities of future development. The distance between Romania and EU countries is so important, that is enough space for Romanian improvement in terms of competitiveness and productivity. In the EU there are global leaders that in order to maintain or improve the productivity and competitiveness of production areas need flexible, efficient, cost effective space of innovation and development. Romania does not have the handicap of past developments that create resistance and blockage in affirmation of new technologies and processes. Romanian managers have to look to a “double-diamond” and assess the features of both Romania and UE when formulating corporate strategy.

Romania must develop superior interaction network of value-added relationships. Our chance is to create strategic partnerships and alliances with international players to take the advantage of their development. A better understanding of marketing tools and a fact that customer perception decides about the quality of the product and service, can help Romanian companies to improve their performance. But because greed is great, at least to some businesses, the risk of blockage in a highly interdependent global economy is high and hence the role of gendarme of regulatory and supervisory institution should be limited, but active.

For harnessing Romania's competitive advantages are required a change of mindset, a creative approach and an aggressive spirit in a good way in the international competition. We need a proactive attitude in a climate of macroeconomic policies able to support Romanian exports.

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## INNOVATION, CUSTOMER ATTACHMENT SOURCE IN RETAIL SERVICES EMPIRICAL RESEARCH IN DIY RETAIL

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**Abstract:** *The topic of the present study is innovation of services in the retail trade of bricolage (Do-It-Yourself, DIY) products and the influence that innovation has on the increase of customer attachment to companies in this field. The Romanian bricolage market brings together representatives of large specialised retail chains in Europe along with large domestic operators, which led us to the choice of this trade as a research field. Innovation is considered an important factor that brings a significant contribution to the success of a business (O’Cass, Song and Yuan, 2012), and services are a priority for economic development. Despite all these, innovation in services is still insufficiently exploited both theoretically and empirically. The object of this study is to apply a qualitative research through semi-conducted interviews with managers from the DIY retail field in order to validate the conceptual model whose inputs, innovation along with the availability and professionalism of the sales staff, act as generators of customer attachment to the company, leading to increased turnover, a permanent fund of customers and loyalty to the store. As a second stage, the proposed model will be tested through a quantitative research, by making use of the customer’s points of view. The three hypotheses of this research (H1: Innovation in services is determined by: the customer’s involvement in the implementation of the service, the use of gadgets in the store to facilitate access to information to the customer, the extension of the in-store services to the virtual environment and customer experience; H2: Innovation together with the availability and knowledge of the sales staff are sources of the customer’s attachment; H3: Attachment acts as a catalyst for the turnover, the permanent fund of customers and the loyalty to the store) have been accepted, the study revealing that in the retail trade of bricolage products, the staff’s availability and professionalism are key elements for the definition of customers’ attachment, along with innovation, which is an extra advantage to customers.*

**Keywords:** *Innovation in services, attachment, retail trade, semi-conducted in-depth interviews*

**JEL classification:** L81, M31

## **Introduction**

Contemporary social and economic development is determined by the evolution of the services sector, which is an important component of the global economy.

Diachronic and synchronic analysis of the dimension of the services sector shows the strong tendency of the economic systems in the developed countries towards 'globalisation', as well as a correlation between the level of development of services and the level of development of national economies. Thus, in the more developed countries, the share of services goes beyond 60 and even 70% in relation to the employed population. Even so, there are still some differences even in the case of these countries, which are determined by the particular patterns of economic growth, different from the point of view of traditions, customs, etc. .(*Ionciță, accessed online 20.03.2013*).

On the operation of the services sector depends the economic development of a nation because this sector triggers the performance and the economic development - producers and exporters cannot become competitive without services such as banking, insurance, accounting, telecoms, retail or transport, thus leading to an increased rate of innovation and technology transfer, and supporting long-term investments (*Enescu and Enescu, 2012*). According to a report published by Eurostat in October 2012, 43% of the employed population in Romania was working in the services sector in 2011 (Eurostat, *accessed online 20.03.2013*). Nevertheless, economic development in Romania is conditioned by an even more active and daring enterprise in the services sector, by encouraging innovation in this area.

At the microeconomic level, companies admit the need of being innovative in their offer of services in order to be well prepared to face the growing competition. The Director of the Research in Services Department of IBM emphasises that 'people have a certain idea about what technological innovation means, but innovation in services is rather unknown' (Yen, Wang, Wei, Hsu and Chiu, 2012).

With this study we want on the one hand to explain the concept of innovation in services and on the other hand to determine, through a qualitative research, the existence of a relationship between innovation and the degree of attachment to service companies, with a practical application in the DIY retail from Bucharest.

## **Innovation in Services**

Paradoxically, innovation in services is still underused both theoretically and empirically despite the fact that services represent a priority for economic development and innovation is regarded as an important factor contributing to the success of a business (O'Cass, Song and Yuan, 2012),. At the same time, innovation in services is described as 'the Next Big Thing!' (Jana 2007 in O'Cass, Song and Yuan, 2012). The aforementioned situation is the reason behind this research. In a paper from 2010, Ostrom et al. define innovation in services as activities that 'create value for customers, employees, owners, partners and the community through offers and processes of services, but also new and/or improved business models' (Ostrom 2010 in Yen, Wang, Wei, Hsu and Chiu, 2012). In light of this definition, innovation in services reveals itself as a continuous process that consists of a series of incremental changes in the products and processes (OSLO Manual, 2005: 38).

Innovation in services is not limited to the uniqueness or novelty of a service only, but also to innovations in other areas of the system, such as the service delivery processes, the interface with the consumer and the buyer-seller relationship. Even

more, if compared to innovation in products, innovation in services often arises from a need or problem that consumers are facing (Kindström, D., et al., 2012).

According to previous studies of Carman & Langeard (1980), Edvardson & Olsson (1996), and Larsson & Bowen (1989), innovation in services is composed of 'interactive innovation' and 'supportive innovation'.

- Interactive innovation refers to the value created through changes initiated by the service company and is designed to determine the consumers who interact with the new service concept to express themselves in relation to this new concept in cognitive, affective and behavioural ways. Interactive innovation consists of three elements that the customer experiences: changes in image or offer (new or improved offers of services), changes in the service delivery mode and changes relating to service personalisation based on the consumer's needs.
- Supportive innovation refers to the changes that help create value for the new service and includes three types of changes: changes related to the implementation of the service (i.e. the identification of new or improved resources used for the development of the service), changes in the supply chain (new or improved supply chain methods) and changes in the quality of service (initiatives that lead to increased quality of service) (Carman&Langeard,1980, Edvardson&Olsson, 1996, Larsson&Bowen 1989 in Salunke, S., et al., 2012).

Particularly in the services sector, consumers are considered to be co-producers and therefore, according to Gummesson, they should be treated as members of the service company, as part-time employees (Gummesson, 2002:69). The consumers' needs and ideas lead to innovations that will finally increase the consumers' attachment to the service company.

The services field being so vast, we focus our research on retail trade in general and on bricolage (DIY) retail trade in particular. Our approach is based on one hand on the fact that in most South-European countries there is a consistent increase in the traditional service sector such as retail trade, transport and tourism (*Enescuand Enescu, 2012*), and on the other hand on the fact that, through its specific properties, the retail trade of bricolage products get the buyers involved in purchasing decisions at a higher degree and therefore triggers more effort into evaluating innovation on the buyers' side (Pop, Săniuță and Roman, 2012). In addition, this type of trade developed significantly over the last decade on the Romanian market, currently over 135 bricolage (DIY) stores being active across the country.

Innovation in retail trade reflects on: *sales form* (type store), *brands* (especially privately-owned ones) that make up the product range, *process innovation*, *customers' experience*, *information technology*, *new communication media employed*, *methods of payment and of order fulfilment* ( Reinartz et. al, 2011). Even more, being an area in which interaction with the customer is the main focus of all activities, the degree of novelty of products, services, processes or business models depends on whether they are perceived as innovative by consumers mainly, and by company representatives secondarily (Hauser and Urban,1977).As a consequence, we can say that innovation is vital to the future of producers and traders, the novelty of products and services that are significantly different from what already exists on the market ensuring the competitive success of a company (Omar: 1995, in Pop and Săniuță, 2012).

## **Obtaining Customer Loyalty through the Attachment Process**

In today's hyper-competitive business environment, marked by globalisation, customer loyalty is critical for the evolution and intensive development of a business (by obtaining loyalty from the existing customer base) and is a major competitive advantage (Smith and Taylor, 2004). Extensive development (through acquisition of new customers) is more difficult to achieve. The economic crisis that we undergo adds even more difficulty to this task by forcing more and more companies into finding new ways to achieve customer satisfaction and loyalty. Today's consumer is more informed and educated, with easy access to information, and therefore more demanding and more difficult to retain in a market saturated with numerous offers from various players. The financial element is no longer sufficient or decisive when it comes to the choices that the customer makes. Most often, the choice is made based on prior information and, especially, based on the relationship built over time with the organisation.

Customer attachment to the organisation, product or brand is built over time, in several steps: first purchase, repurchase, fidelity, loyalty. The mandatory condition for the transition to the next stage is satisfaction. In case dissatisfaction occurs during one of these stages, the customer will abandon the product or service of that organisation and will switch to a competitor's offer. If, after repeated purchases and after the loyalty phase has been reached, the customer is excited about the value obtained, then he will reach the exclusivity phase when he totally ignores other competing products or services on the market (Pop, 2005). In addition, Oliver (1999) sustains that cumulative satisfaction will influence loyalty, not just satisfaction after a single purchase.

Satisfaction is the customer's answer showing the extent to which his expectations have been met. It is a statement that certain features or the entire purchased product or service provides a satisfactory level of consumption-related fulfilment (Oliver, 1997). In the retail sector, customer satisfaction can be defined as the 'post-consumption evaluation of how well the store or product managed to meet or exceed the customer's expectations' (Levy and Weitz, 2009).

In the Romanian retail system, and not only, loyalty programs typically provide some points that are calculated in report to the sum of money spent on every transaction. In most cases, these points are recorded on a membership card, which is presented at the point of sale.

Loyalty programs provide monetary and non-monetary benefits based on the amount of money spent on purchasing goods and/or services (Stauss et al., 2005). But customer loyalty is about building a long-term relationship with the customer. Therefore, as stated by many researchers in their work (Fournier and Yao, 1997; Pritchard et al., 1999; Bowen and Chen, 2001; Rundle-Thiele and Mackay, 2001; Koo, 2003; Kumar and Shah, 2004; Wong and Sohal, 2003, Rundle-Thiele, 2005), the conceptualisation of loyalty should also take into consideration other emotional factors, such as resistance to the competitors' offerings, tendency towards loyalty, statements of disagreement and complaints, etc.

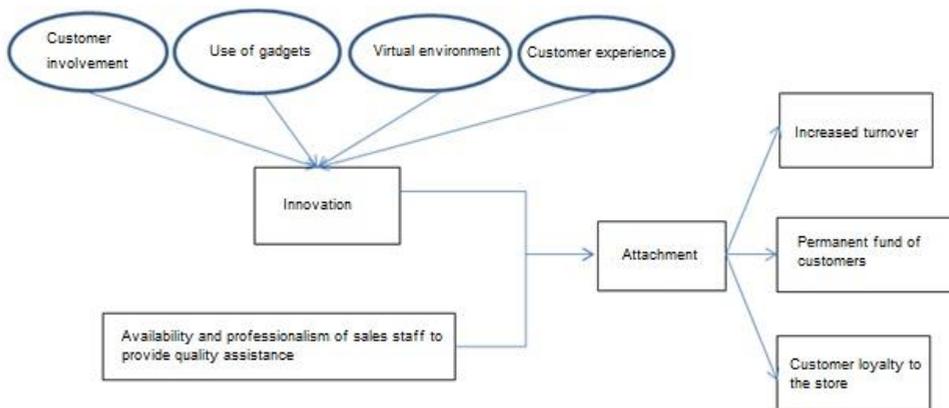
The definition of loyalty in retail can be phrased as follows: 'the attitudinal and behavioural preference for a retailer as compared to the alternatives available at the competitors' (Wallace et al., 2004: 251 in Vesel, Zabkar, 2009). Research shows that 'polygamous loyalty' (consumers' tendency to divide their loyalty among several

brands) closely describes the consumer's behaviour in retail (Dowling and Uncles, 1997 in Davis-Sramek, Mentzer and Stank, 2008).

Long-term loyalty remains an ambitious goal to achieve, an 'elusive dream' for many organisations, indicating that there is still much to learn and understand on this topic (Karjaluoto et. al., 2012).

## Methodology

The proposed conceptual model involves the previously developed concepts: innovation and sales staff's availability and knowledge in order to provide quality services. The two constructs are the input of this model and together determine the attachment. In its turn, attachment generates an increased turnover, a permanent fund of customers and loyalty to the store.



**Figure 1:** – The conceptual model of research  
Source: realized by the authors of this research

According to Churchill (1979: 67), when conceptualizing constructs, it is imperative to analyze the existing literature. To measure innovation in services, four dimensions have been taken into account:

- Customer involvement in achieving the service  
Services emerged in response to customers' (or the market's) needs, so that customers, as main beneficiaries, act as co-producers of services. Co-creation is a key concept in service innovation because innovation depends on a good knowledge of the customer, on his network of acquaintances and on his skills (Chae, 2012). Also, in a recent study conducted by IBM on 26,000 subjects in 14 countries, 89% of participants declared their availability to spend 20 minutes of their time to help a retailer better understand their needs, in order to conceive an offer that meets these needs (IBM Institute for Business Value, 2013).
- The use of gadgets inside the store to facilitate customers' access to information

In a survey conducted in 2012 on 'Perception and communication of innovation in retail', the taxonomy of innovation types in the DIY retail trade has been developed. One type of innovation is 'Innovations in the act of selling itself', with the following concrete forms of expression: mobile assistant (on various gadgets) for shopping, room for testing and creativity, innovative payment and settlement systems, buy-back and customer incentives to recycle materials, electronic information points, displays providing discounts based on the information held about customers (Pop, Săniuță and Roman, 2012).

- Extension of the in-store services to the virtual environment

Today's technologies have changed the way consumers make their purchases. Although for 84% of consumers (IBM Institute for Business Value, 2013), stores are the first choice when it comes to purchases, we should not ignore that consumers gather information in advance in the virtual world. As a result, the weak connection between the two environments, real and virtual, must be improved so that the experience from an environment extends to the other environment.

- Customer experience

Consumers' experience in retail can be expressed as the sum of all the experiences that they have when they make purchases in a store. To use this concept in service innovation, retailers need to understand this phenomenon and to rethink processes so that each visit in the store is an enjoyable experience for the customer (Ostrom et. Al, 2010).

The introduction of the variable 'Availability and professionalism of sales staff to provide quality assistance' is based on the following arguments: Jackson and Shaw (in Kent and Omar, 2003: 172) noted that the most valuable element of the extended marketing mix is the people because of their role in customer service and customer relationship management.

Retail means working and serving customers in a direct and personal way, so, in a rapidly changing and highly competitive environment, well trained and motivated employees are essential to the long-term success of retail companies (Merkel, Jackson and Pick, 2010). In bricolage (DIY) retail, the need of well trained and informed employees is even greater than in other fields because in this sector customers need additional advice and especially because, beyond the material satisfaction of needs, emotional needs are also involved – customer's involvement in creating his own home or entertainment area.

According to Gummesson, employees are motivated to demonstrate their skills and customer orientation if they are well informed (Gummesson, 2002: 202). Additionally, a qualitative research conducted among employees of a bricolage (DIY) retailer in Bucharest showed that employees feel the need for communication training, which will help them establish an empathic connection with the customer. Even more, a new perception is required, that leads to perceiving the customer as a partner in the sales process and not just as a beneficiary of the sale (Pop and Săniuță, 2012).

The high number of competitors on the retail market of bricolage products, which results in a 'war of the offers' having as prize consumers' 'wallet', determined consumers to direct their preferences towards multiple retailers instead of only one. Retailers who succeed to attract consumers on their side and to develop long-term relationships with them will benefit, according to the model to be tested, from:

- Increased turnover
- Permanent fund of customers
- Customer loyalty to the store. According to a survey conducted by the company G.F.K. Nürnberg from Germany, brand loyalty is higher than store loyalty, which motivated us to search for factors that may contribute to the balance between brand loyalty and store loyalty (Mălcome, 2010).

The following hypotheses are illustrated in our model:

H1: Innovation in services is determined by the customer's involvement in the development of the service, in-store use of gadgets to facilitate customer's access to information, extension of services from the store to the virtual environment and customer experience.

H2: Innovation together with the availability and knowledge of sales staff are sources for customer attachment.

H3: Attachment acts as a catalyst on turnover, permanent fund of customers and loyalty to the store.

To validate the model, the first phase consists of a qualitative research in the form of semi-conducted in-depth interviews with managers from Romanian bricolage (DIY) companies. Since the main purpose of this research is to clarify and better understand the coordinates of the bricolage market, we can qualify this approach as an exploratory one, which represents a preliminary step for further studies (Cătoi, 2009: 74). The semi-conducted interview brings a set of topics in discussion, usually five to six, and uses as a tool the interview guide (Zikmund in Brătucu and Brătucu, 2006: 49). The interview guide contained the four parts recommended by Jolibert and Jourdan (2011:23), part 1: The introductory phrase where we explained the purpose of our approach and asked for the manager's permission to record the interview; part 2: the beginning of the interview where a general question was asked in order to establish the main subject; part 3: the interview's themes were freely discussed; part 4: the conclusion allowed us to see if there were any circumstances that could bias the validity of the information – such confidential issues – and also, obtain a feedback from each respondent.

The duration of the interviews ranged between 45 minutes and one hour, during which respondents were asked to talk about the aforementioned constructs and about possible connections among them. No preset order was imposed according to the rules of the semi-conducted interview (Cătoi, 2009: 220), and the views expressed by participants were recorded and analysed at a later time.

The content analysis is usually performed by using the rough material obtained during the interviews (Jolibert and Jourdan: 2011, 52). Therefore, the recorded interviews were transcribed, separately read by the authors and each one build an individual interpretative framework. For this purpose, the lexical analysis allowed identifying redundant words, whereas the textual analysis emphasized phrases that were dealing with the same theme. Once the data was categorized in several themes, a relational analysis (Jolibert and Jourdan: 2011, 55) was performed in order to quantify the associations between concepts, the proximity of their connection or

interference. At the end of the stage, the four resulted analysis were confronted and discussed by the authors.

## Results

Conducted throughout a week, the stage of gathering information for this research revealed interesting results that confirm or contradict the preset hypotheses, as shown below. The gathered data can be applied in the process of customer relationship management and is a basis for starting a customer loyalty program through innovation.

The availability of interlocutors to answer questions, and especially their willingness to share their topic-related experience with us led to the following results. Most subjects gave a positive response with regard to innovation in customer's involvement in the development of the service. The use of technological innovations (e.g. software permitting customers to simulate the design of their bathroom or the look of their favourite room with their choice of parquet) was on the same place as the previously mentioned dimension in terms of the number of responses. The other two dimensions were brought into discussion to a smaller extent, despite the fact that the literature places the customer's buying experience at the core of the process (authors like Vargo and Lusch, 2004; 2010, Prahalad and Ramaswamy, 2004, dedicated a lot of studies to this concept). As early as 1955, Abbott (in Holbrook; 2006) declared that 'what people really want are not products, but products that offer them experiences, they use products with the hope of getting the experience they need.' A part of our interlocutors have mentioned about the change of conduct in the purchasing act and they pointed out that many customers research first for the product in the virtual environment and then come into the store to purchase the item. Although only two of the dimensions were validated by the most of interlocutors, we accept the *hypothesis H1* so we can test it in the quantitative phase of the study.

Subjects agreed unanimously that on how the sales staff treats the customers depends the latter's attachment to the company. Subjects also agreed that innovation as a novelty factor attracts customers, the role of the sales force being to help customers understand the benefits of innovations. One interlocutor said that he was working together with the human resources department on a training program for staff directly involved with customers so that they acquire the ability to empathise with customers and provide them with the best experience possible. 'I have studied this at our main competitor and it seems that, besides the range of products and services, the staff is an important reason that determined customers to turn to our competitor's stores.' Based on the aforementioned information, we accept the *hypothesis H2*.

People who participated in the study say either that they do not have a coherent customer loyalty program or that the existing program (with the cards on which customer accumulate points for their purchases) does not give the expected results. Interlocutors answered affirmatively to the questions meant to test the third hypothesis, and could not provide figures and real cases. One of them said that he understands the necessity of adoption of a holistic perspective of loyalty – not only a system of accumulating points and receiving something in place of this, but a system which transform the customer into a partner of the business.

From a theoretical point of view, *hypothesis H3* can be accepted with reserve, the quantitative research, which will take into account the perspective of customers, being able to validate the proposed conceptual model.

The qualitative approach gave us valuable inputs in order to design the further research that aims to investigate the customer perspective regarding innovation in services and the relationship between it and attachment.

## **Conclusions**

Innovation in the DIY retail requires a strong focus on services which complement the products. This way, customers can make the best choice judging by the triad: price-quality-the extent to which their needs were satisfied. To be able to provide customers with an enjoyable shopping experience, retail employees must have the technical knowledge to provide complete information to customers and must acquire the skills to empathise with them in order to offer the best solutions for home construction or optimisation. As we mentioned in the conceptual clarification, long-term loyalty remains an ambitious objective (Karjaluo et al., 2012), requiring sustainable organisational change which shifts from the transactional view to the relational view.

Although the conceptual model needs to be tested as well through a quantitative research, our findings suggest a couple of implications for companies acting on the DIY market to maximize the value they offer to customer through services. Adopt a culture of innovation by involving the customer in achieving the service, creating a positive customer experience and take advantage of technology and virtual environment will have a favorable impact on the business. Managers who want successfully create a culture of innovation need to understand the necessity of well-trained sales staff – an efficacious workforce is built through selection and training, goal setting and on-the-job coaching (Bandura, 1997; Jex and Bliese, 1999 in Yim, Chan and Lam, 2012).

The main limitation that should be considered when interpreting the results is the qualitative nature of the research. In order to overcome this limitation further research should test the model through a quantitative method to contribute to a fuller understanding of the role of innovation in services from a customer perspective.

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## PRIVATE INFORMATION REVEALED BY ROMANIAN FACEBOOK USERS - AN EXPLORATORY ASSESSMENT

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**Abstract:** *The use of online social networks has become part of our lives. More and more people join networks, create their online profile, add pictures with themselves, add personal information about them, find people they know and connect with them, share and like posts, comments, pictures or movies and many more. The social networks allow more and more features and people are open and willing to try them. In this context, it is important for those who own such a profile to be aware of how their personal information is handled, who can view the data they publish in the social network and how they can protect the information they post, by granting access to it only to those persons they want to. The objective of this research was to study what type of information Romanian Facebook users are revealing on their profiles. We have conducted an empirical research, based on an online questionnaire which was available to be accessed in March 2013. 42,5% of the respondents, aged between 21 and 40, formed mostly my employees, managers and students, have not shared on their profiles neither their phone number, their home address, nor their messenger ID. Even though we have considered that the email address was also considered personal and very private information, our assumption did not confirmed, about 30% of the respondents have their email address shown on their profile. At the opposite side, it was confirmed that the gender, real name, personal pictures, birthday and current town are information published by more than 80% the respondents. The respondents do know and do make a difference between having their profile shown when searched on Facebook and allowing their profile to be visualised by whomever they want. Even though most of the respondents have their profile public when searched for it, the great majority have set that only their friends to be able to see the information they post online. Only about 10% of the respondents have added or have accepted friendship requests from people they did not know before and about 30% have never accepted such requests. Overall, we may say that our respondents are careful about what their share on Facebook.*

**Keywords:** consumer private information; online privacy; social media privacy; Facebook Romanian users;

**JEL classification:** M31;

## 1. Introduction

The growing popularity of social networks can be explained by the fact that people want to get in touch with new persons, to be connected to their friends, family, colleagues or acquaintances or to be present online. By using social networks members can create the profile they want for themselves, share photos, videos, music, play games or use different applications available, compile lists of friends that they can link to, create or join groups of people with similar interests, announce events and invite people to attend. In the same time, they can easily communicate with the persons they know, send and receive messages, share their ideas, write entries on their own and the others profiles, walls or timelines, allow comments to their posts.

According to Alexa (2013), the most visited websites worldwide in March 2013 were: google.com, facebook.com, youtube.com, yahoo.com, baidu.com, wikipedia.org, live.com, amazon.com, qq.com, taobao.com, blogspot.com, twitter.com, google.co.in, linkedin.com, yahoo.co.in and bing.com. It can be observed that most of the websites are search engines, but among the top three, there are two social networks. According to their website there were more than a billion monthly active users as of December 2012, out of which about 82% are users located outside US or Canada (Facebook, 2013).

## 2. Literature review

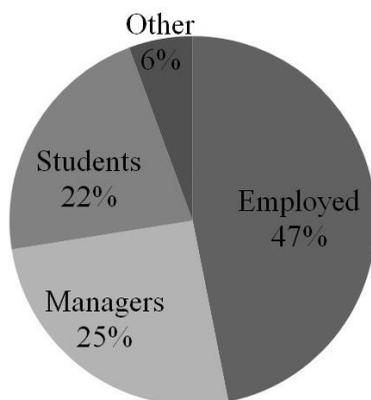
Social networking websites have added a new dimension not only to the way people and organizations communicate, but also to the way in which they use the wealth of information available in the social network (Malik, Malik, 2011), how they search or how they investigate other persons or competitors. Social networking sites record information about users such as: name, gender, birthday, relationship status, educational and employment history, religious or political views, sexual preference etc. (Qi, Edgar-Nevill, 2011, p. 76) and this information will be kept in perpetuity and taking into consideration that one entity collects and controls so much personal data, a user should find a balance between his updates and the protection of his and his beloved ones privacy.

When being members of online social networks people should keep in mind that their privacy and their privacy's 5Ws *what, where, who, why* and *how* is important. The inputs (*what*) that they or their connected profiles (mostly friends) submit, enter the network, from *where*, it can be seen, accessed and observed by other members of the network, *who*, for different reasons may use that information constructively or negatively (*how*). The study done by Ieng-Fat, Kuan-Ta and Ling-Jyh confirms that revealing personal information online is a double-edged sword and discuss the problem of information leakage in social network services (2008, p.2). They also explain the fact that other people may reveal information about a Friend through the comments they make (Friend is "the best steak chef in Boston" - from where the occupation and location is disclosed), by tagging and describing photos uploaded (Him and Friend at Someone's wedding - how friend looks like and the fact that he knows a third person) or by adding them in lists (for instance Faculty colleagues). All this information (and much more) can get on the wrong hands and may lead to stalking (Al Hasib, 2009, p. 291, Tan et.al, 2012, p.212), spamming or phishing (spear or social) (Ieng-Fat, Kuan-Ta, Ling-Jyh, 2008, p.13), malvertising (Sophos, 2010), profile squatting through identity theft (Ulrike, 2011).

### 3. Methodological notes

The objectives of the research included: study the type of information Romanian Facebook users are revealing on their profiles; the use of privacy settings regarding the search and visualisation of their profile; identify some activities done by the consumers on the social network.

A survey was conducted using an online questionnaire, which was delivered randomly over Facebook. We conducted the survey in March 2013 and received 160 full answers, all of the respondents owning at least one Facebook account, for an approximately 4% response rate. The respondents are Romanian, almost evenly balanced between genders, being aged 21 to 40, half of the women and men being aged under or equal 25 years old. 91 of the respondents live in Bucharest and the rest in other towns. A large majority (over 83%) is made of university graduates and hold a professional status as presented in Figure 1 - only 4 of the respondents mentioned that they were unemployed at the moment of filling in the questionnaire.



**Figure 1:** The professional status of the respondents (%)

The "employed" respondents mentioned to be part either of public or private organizations; the "managers" are either freelancers (16,66%), have their own company (40,47%) or they are department managers (42,87%) within private or public organizations. The "students" are either faculty enrolled students, master students or doctoral students. Among the "other" occupations there were mentioned housewives or in maternity leaves.

In Table 1 it is presented the marital status of the respondents, both male and female, in accordance with their age (either under or equal to 25, or above 25 years old up to 40).

**Table 1:** Marital status of the respondents (%)

Marital status	Age		Total
	≤25	>25	
married	1,9%	20,6%	22,5%
live together, not married	6,9%	5,0%	11,9%
not married	41,3%	23,8%	65,0%
divorced	0,0%	0,6%	0,6%
<b>Total</b>	50%	50%	100%

One of the respondents mentioned to be divorced, all the rest were either married (22,5%) or not (76,9%).

The questionnaire included 16 questions, out of which seven were related to their demographic details and social networks' usage and the rest were approaching the privacy of the Facebook account and the way this account was used by the respondent in the last 12 months.

#### 4. Main findings

None of the Facebook users interviewed mentioned to use this social network less than 1 or 2 times a week and only 7 of the respondents do not use or do not have a YouTube account, as seen in Table 2.

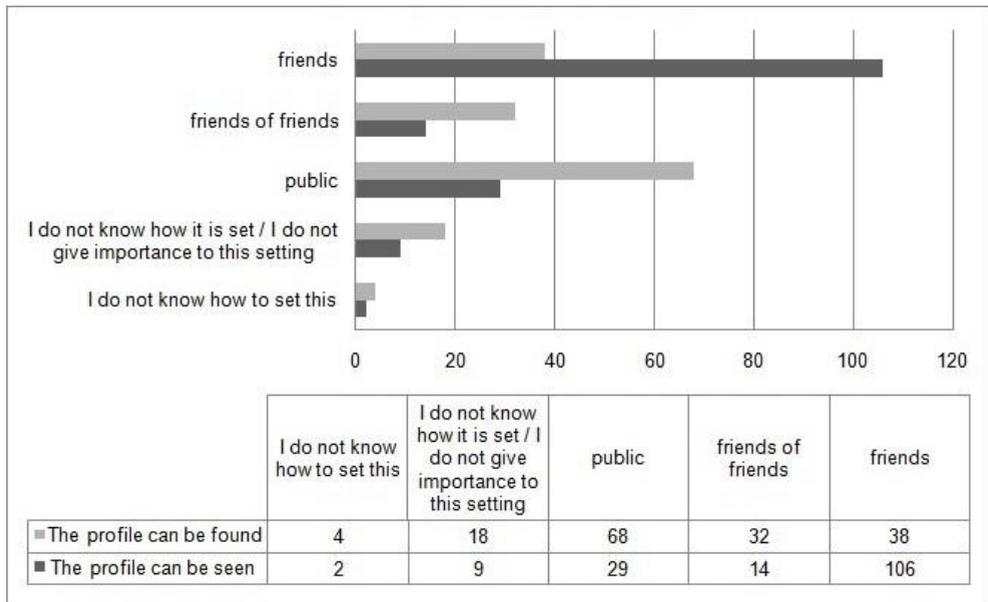
**Table 2:** Frequency of social networks usage (n=160)

	more times a day	about one time a day	3-5 times a week	1-2 times a week	once in several weeks	seldomly	I do not own an account in this network	I do not know / I do not answer
<b>Facebook</b>	127 (79.38%)	22 (13.75%)	9 (5.63%)	2 (1.25%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
<b>YouTube</b>	64 (40.00%)	36 (22.50%)	25 (15.63%)	20 (12.50%)	4 (2.50%)	4 (2.50%)	7 (4.38%)	0 (0.00%)
<b>LinkedIn</b>	8 (5.00%)	11 (6.88%)	12 (7.50%)	25 (15.63%)	12 (7.50%)	20 (12.50%)	59 (36.88%)	13 (8.13%)
<b>Twitter</b>	6 (3.75%)	2 (1.25%)	1 (0.63%)	6 (3.75%)	8 (5.00%)	25 (15.63%)	100 (62.50%)	12 (7.50%)
<b>Google +</b>	23 (14.38%)	6 (3.75%)	3 (1.88%)	5 (3.13%)	15 (9.38%)	43 (26.88%)	56 (35.00%)	9 (5.63%)
<b>Pinterest</b>	1 (0.63%)	5 (3.13%)	5 (3.13%)	5 (3.13%)	10 (6.25%)	11 (6.88%)	104 (65.00%)	19 (11.88%)
<b>Hi5</b>	0 (0.00%)	1 (0.63%)	0 (0.00%)	2 (1.25%)	1 (0.63%)	24 (15.00%)	116 (72.50%)	16 (10.00%)
<b>Netlog</b>	1 (0.63%)	0 (0.00%)	0 (0.00%)	2 (1.25%)	4 (2.50%)	9 (5.63%)	127 (79.38%)	17 (10.63%)
<b>Neogen</b>	0 (0.00%)	0 (0.00%)	1 (0.63%)	1 (0.63%)	0 (0.00%)	9 (5.63%)	130 (81.25%)	19 (11.88%)
<b>MySpace</b>	0 (0.00%)	0 (0.00%)	1 (0.63%)	0 (0.00%)	2 (1.25%)	12 (7.50%)	128 (80.00%)	17 (10.63%)
<b>Flickr</b>	1 (0.63%)	0 (0.00%)	2 (1.25%)	1 (0.63%)	6 (3.75%)	9 (5.63%)	124 (77.50%)	17 (10.63%)

On average, 15 respondents did not hear about social networks such as LinkedIn, Twitter, Google +, Pinterest, Hi5, Netlog, Neogen, MySpace or Flickr and about 105 of them do not have accounts on these networks. The most popular social networks are, by far, Facebook and YouTube, followed by Google + and LinkedIn, all the rest turned out to be not that attractive for the Romanian users.

The percentages are kind of balanced between those respondents who have set for their profile to be private (43,75%, both for friends and friends of friends) and public (42,5%) when searched for it. 22 of the respondents do not know the setting of their searched profile, do not know how to set it or just do not consider important this

setting. As it appears in Figure 2, the things change dramatically when asked about who can see the information they post on their personal Facebook profiles.



**Figure 2:** The profile privacy setting for *search* and *visualisation*

There were only *nine* respondents who mentioned that they did not give importance to this setting or do not know how to set this, out of which four of them are aged under 25 years old (one manager, two students and one other professional status / three females and one male respondent), and from the rest (above 25 years), three are employed and two are managers. The *two* respondents who recognised they do not know how to make the setting are 28, respectively 32 years old. From this total of 11 respondents, nine are among those 22 who answered similarly about their preference for their *searched* profile.

From those 68 respondents whose profile is public when searched on Facebook, 41 of them permit only to their friends to see their information and what they post; two allow also to the friends of their friends, 24 kept it public also for visualization and one does not know for sure.

According to the type of information the respondents have posted on their own Facebook profiles, we have identified that on this social network there are *four* types of privacy levels, presented in Table 2. We consider information such as: home address, messenger ID, webpage and phone number as *very private* information, because equal or less than 15% of the respondents have provided these sections on their Facebook profiles. The religion, favourite quotations, previous jobs, email addresses, whether interested in men or women section, personal motto, upload of a personal movie, political views or the automatically appearance of the location when posting on Facebook are considered to be *private* information since less than half of the respondents provided them on their profiles. Of course, it should be taken into consideration the fact that some people may have not filled in some of these sections not because of their privacy, but because they do not consider it is worthy

to have this information specified (whether interested in men / women, motto, favourite quotations), not having this information (previous jobs, website) or for any other personal reasons.

**Table 2:** The information revealed on the respondents' profiles

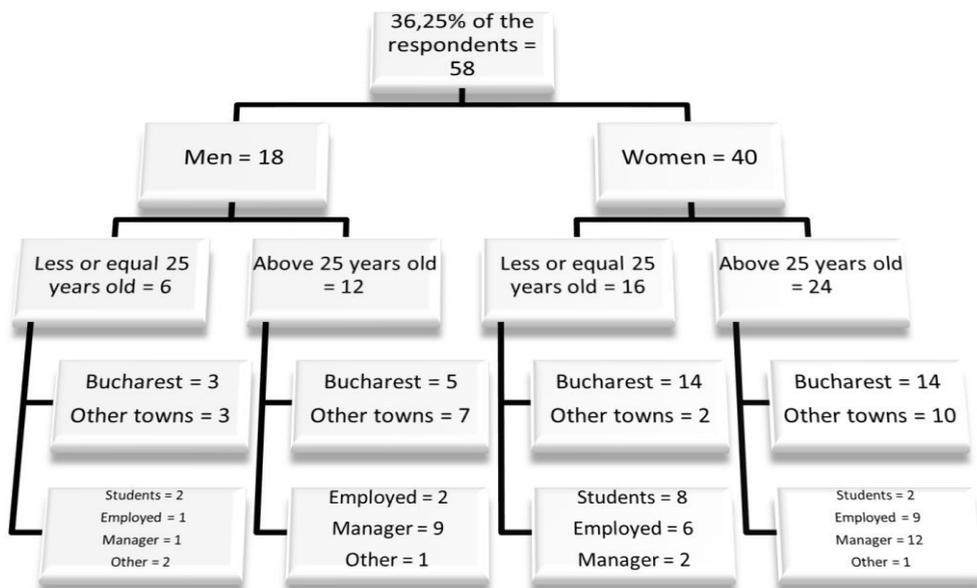
Information revealed	Frequency	Percentage
Gender	150	93,75%
Real name (both first and family)	147	91,88%
Added at least one personal picture	141	88,13%
Birthday	138	86,25%
Current town	131	81,88%
Levels of education graduated	109	68,13%
Added at least one family member	104	65,00%
Hometown	102	63,75%
Where studying	89	55,63%
Relationship status	86	53,75%
Current workplace	84	52,50%
Foreign languages	82	51,25%
Religion	57	35,63%
Favourite quotations	57	35,63%
Previous jobs	57	35,63%
Email address (other than Facebook)	47	29,38%
Interested in (men / women)	44	27,50%
Motto / About you	44	27,50%
Added at least a personal movie	39	24,38%
Political views	33	20,63%
Automatically location appearance	33	20,63%
Phone number	24	15%
Webpage	24	15%
Messenger ID	23	14,38%
Home address	5	3,13%

More than half of the respondents, but less than three-fourths of them, specify the levels of education they graduated, family members, hometown, where they are currently studying, their relationship status, current workplace and the foreign languages they speak, on their Facebook profile. These types of information are *less private*. Due to the fact that more than 80% of the respondents have no problem with offering information such as: current town, birthday, personal picture, real name and gender, on their profiles, we tend to consider these types of information as *not private*. We can conclude this by referring to the presence on Facebook of Romanian consumers who have given access to their friends and friends of friends in a proportion of 75%. It should also be highlighted that only 18.8% of the respondents checked out their Facebook profiles when answering the question.

Being asked about their activity on the social network from the last year, only 17 respondents mentioned that they added people they do not know, as friends on Facebook (and then most of them confirmed that one of the reasons they use this network is to become more popular) and 10 of these have also accepted friendship invitations from people they did not know before. Taking into consideration the rest, 47,5% mentioned they rarely or very rarely have added unknown persons into their network, 40% mentioned they have never added strangers and 3 respondents did not remember or did not want to answer. More than half of the respondents (58,13%) have rarely accepted invitations from people they did not know and 31,25% have never accepted such friendship requests.

Almost half of the respondents uploaded often or very often personal pictures or movies on their profile, only 9 have never uploaded such a file. The great majority (95,62%) of the Facebook users confirmed they have appeared in at least one picture or movie uploaded by their friends and 92,5% have accepted to be tagged in it (to be created a link to their profile, their name to appear on the picture or status), 4 respondents have never appeared and 3 did not remember.

It is very important to be noted the fact that 58 persons have never filled on their Facebook profile, information such as home address, phone number, email address or messenger ID. In Figure 3 there are presented their demographic characteristics:



**Figure 3:** Demographic information about those respondents who have never filled in private information

### 5. Conclusions and future directions of research

People are not concerned about providing their real name and adding a picture of their self on their Facebook profile. On the other hand, some members sign in social networks, connect to people they know and prefer not to share any information about themselves, but they should also be careful about their privacy, since their friends may disclose such data about them.

One of the most surprising conclusion that we draw, was the fact that the personal email address of the respondents did not turn to be that private in social networks. We have started this research with the hypothesis of having as very private information: the home address, phone number, email address and messenger ID, but the email was not confirmed to be as private as we supposed. We may say that the websites do not appear on people's profiles mainly because they probably do not own a company / a blog etc. and do not have to promote it on their Facebook profile. There were a percent of 63,12%, 101 respondents who have not initially filled in the home address, phone number, email address and their messenger ID, but out of which only 58 persons still have not filled in any of those fields in the last year. It would be interesting to assess in the future the perceived usefulness, ease of use, privacy concern and behavioural intention of the Romanian consumers about Facebook. Another future direction of research could include the assessment of the user's awareness about the threats and management of privacy preferences on the social network. Also, it would be interesting to research the existing legislation and whether it deals with the challenges offered by the social networks.

## 6. Acknowledgements

The authors of this paper would like to thank the UEFISCDI (Executive Unit for Financing Higher Education, Research, Development, and Innovation) for the support provided in conducting this research and the dissemination of its results, through the Research Grant No. 27/26.10.2011.

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## HOW MUCH CAN WE TRUST PUBLIC OPINION POLLS?

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**Abstract:** *Peoples trust numbers and likes to give them some significance. Every time we open a newspaper, listen to the radio, watch TV or browse the Internet we'll see some numbers and stats. These numbers can give a brief overview of the world surrounding ourselves and are often used by people or organizations to strengthen their message. Can we trust public opinion poll? Can these polls be manipulated? What method of manipulation can be used to alter the results of these polls? I designed two experiments to see how a person can misinterpret some data and how can a person manipulate a poll to obtain the desired numbers. Experiments are a qualitative market research tool designed to give us an empirical knowledge about the subject we are studying. The objective of this study was to determine whether we can influence subject's voting choices by manipulating their perceptions and their questioners. "Yes Sir" experiment was based on a misleading questioner with a lot of questions that leads the respondent to the desired answer and with formulating the question in such a manner that the respondent feels compelled to give the desired answer. "Fake Poll" experiment is designed to see if previous polls have any influence on voter's intentions and behaviour and is bases on bandwagon effect. The results of these experiments show us that this ways of manipulation works very well and we can influence the way people will vote with a percentage from 3% to 6%.*

**Keywords:** *political marketing, marketing experiment, bandwagon effect, polls manipulation, "Yes Sir" experiment, "Fake Poll" experiment.*

**JEL classification:** *M31*

### 1. Introduction

Almost every day a new poll appears in mass-media giving us an inside view on what customers and clients want. These polls vary from one area to another. A very active area in which we often receive surveys is political marketing. Political marketing is designed to influence consumers about political issues, particular candidates for public office, or public issues. Although political marketing uses many of the same techniques that other forms of marketing do, it is actually used to promote a concept or an idea, rather than a specific product or service, and to motivate people to vote for that idea.

The way people can interpret the information they come in contact with is very important in political marketing. Political marketing was defined as "the applications of marketing principles and procedures in political campaigns by various individuals and organizations. The procedures involved include the analysis, development, execution, and management of strategic campaigns by candidates, political parties, governments, lobbyists, and interest groups that seek to drive public opinion, advance their own ideologies, win elections, and pass legislation and referenda in

response to the need and wants of selected people and groups in society” (Brățucu, 1995, p 25)

One of the biggest problems in political marketing is the bandwagon effect which occurs in voting: some people vote for those candidates or parties who are likely to succeed (or are proclaimed as such by the media), hoping to be on the "winner's side" in the end. The bandwagon effect has been applied to situations involving majority opinion, such as political outcomes, where people alter their opinions to the majority view (McAllister and Studlar, 1991, p 721). Such a shift in opinion can occur because individuals draw inferences from the decisions of others, as in an informational cascade.

Several studies have tested this theory of the bandwagon effect in political decision making. In the 1994 study of Robert K. Goidel and Todd G. Shields in *The Journal of Politics*, 180 students at the University of Kentucky were randomly assigned to nine groups and were asked questions about the same set of election scenarios. About 70% of subjects received information about the expected winner (Goidel and Shields, 1994, p 807). Independents, which are those who do not vote based on the endorsement of any party and are ultimately neutral, were influenced strongly in favour of the person expected to win. Expectations played a significant role throughout the study. It was found that independents are twice as likely to vote for the Republican candidate when the Republican is expected to win. From the results, it was also found that when the Democrat was expected to win, independent Republicans and weak Republicans were more likely to vote for the Democratic candidate.

A study by Albert Mehrabian, reported in *The Journal of Applied Social Psychology* (1998), tested the relative importance of the bandwagon (rally around the winner) effect versus the underdog (empathic support for those trailing) effect. Bogus poll results presented to voters prior to the 1996 Republican primary clearly showed the bandwagon effect to predominate on balance. Indeed, approximately 6% of the variance in the vote was explained in terms of the bogus polls, showing that poll results (whether accurate or inaccurate) can significantly influence election results in closely contested elections. In particular, assuming that one candidate "is an initial favourite by a slim margin, reports of polls showing that candidate as the leader in the race will increase his or her favourable margin" (Mehrabian, 1998, p. 2128). Thus, as poll results are repeatedly reported, the bandwagon effect will tend to snowball and become a powerful aid to leading candidates.

During the 1992 U.S. presidential election, Vicki G. Morwitz and Carol Pluzinski conducted a study, which was published in *The Journal of Consumer Research*. At a large north-eastern university, some of 214 volunteer business students were given the results of student and national polls indicating that Bill Clinton was in the lead. Others were not exposed to the results of the polls. Several students who had intended to vote for Bush changed their minds after seeing the poll results (Morwitz and Pluzinski, 1992, p 58-64).

Additionally, British polls have shown an increase to public exposure. Sixty-eight percent of voters had heard of the general election campaign results of the opinion poll in 1979. In 1987, this number of voters aware of the results increased to 74% (McAllister and Studlar, 1991, p 725).

In June 2012 in Romania took place local elections and approximately 300.000 people from 96 parties, alliances and independents battled for approximately 45.000

seats. In December 2012 in Romania took place parliamentary elections. During the electoral campaign the candidates and media published hundreds of opinion polls and after the election was over they publish the exit-polls. What was peculiar about these opinion polls was the fact that their results were very often in contradiction in spite of the fact that the polls were made in the same period of time, on the same population, same number of people, same sampling and collecting data method. Theoretically the results should be the same. Was this just a statistical error or a case of manipulation?

To answer this question I designed some experiments which will help me to determine if opinion polls influence or change voter's intentions and behaviour.

According to Oxford Dictionaries manipulation is "the action of manipulating something in a skilful manner" or "the action of manipulating someone in a clever or unscrupulous way." One of the most powerful forms of manipulation used by politicians is to quote numbers and statistics that support their assertions and conclusions. They love to show how people love them by using numbers from polls they ordered.

The key to a successful manipulation is to use as much of the truth as possible. In the case of numbers and statistics it works best to use real numbers rather than making them up. The distortion begins with the source of the numbers. If you hire any market research company to do a study for you they can probably engineer almost any result you wish by setting up the study in a certain way that biases the data. This is the garbage in - garbage out phenomenon. Just because the number was accurately calculated does not mean that what is being measured is being measured properly. The messages and statistics are then released to the media through press releases, advertising or delivered by a spokesperson, or in some cases they are delivered directly by company representatives or politicians. This is remarkably effective because the media will often use these "sound bites" of information without checking to find out if they are accurate - this is especially true of numbers and statistics. As news services continue to cut back on investigative journalism resources and staff this is becoming more and more common.

This is a very unfortunate phenomenon because the general public tends trust the media to be true and accurate. As soon as the numbers appear in the media they become more credible and are usually treated as facts. This makes it much easier for the politicians to mislead us.

## **2. "Yes Sir" Experiment**

In my research I found a lot of ways to manipulate using polls. There are easy and rough ways like just faking the numbers and there are more sophisticated ways like influencing people's answers.

I designed an experiment to see how a person can manipulate a poll to obtain the desired numbers by influencing people's answers. One of the most easiest and used method is to setting up the study in a certain way that biases the data. The way they do that is by putting a lot of questions that leads the respondent to the desired answer or by putting the question in such a manner that the respondent feels compelled to give the desired answer.

The wording of the questions, the order in which they are asked and the number and form of alternative answers offered can influence results of polls. This is also referred to as setting up a "context effect." For instance, the public is more likely to

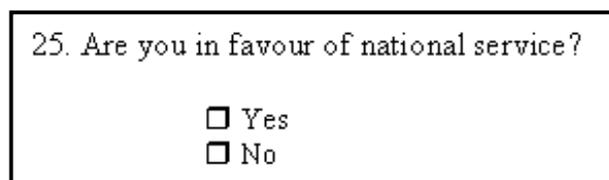
indicate support for a person who is described by the operator or a previous question as one of the "leading candidates". This method uses the spiral of silence technique. The theory asserts that a person is less likely to voice an opinion on a topic if one feels that one is in the minority for fear of reprisal or isolation from the majority.

Why is this method so efficient? Because it uses a lot of persuasion technique and it manipulate people in so many different ways. When I build my questioner I tried to use different technique like foot-in-the-door and the halo effect.

Foot-in-the-door technique (FITD) is a compliance tactic that involves getting a person to agree to a large request by first setting them up by having that person agrees to a modest request. The foot-in-the-door technique succeeds due to a basic human reality that social scientists call "successive approximations". Basically, the more a subject goes along with small requests or commitments, the more likely that subject is to continue in a desired direction of attitude or behavioural change and feel obligated to go along with larger requests. FITD works by first getting a small yes and then getting an even bigger yes. The principle involved is that a small agreement creates a bond between the requester and the requester. The other person has to justify their agreement to themselves. They cannot use the first request as something significant, so they have to convince themselves that it is because they are nice and like the requester or that they actually are interested in the item being requested. In a future request, they then feel obliged to act consistently with their internal explanation they have built.

The halo effect is a cognitive bias whereby the perception of one trait (i.e. a characteristic of a person or object) is influenced by the perception of another trait (or several traits) of that person or object. An example would be answering to multiple questions in the same ways just because the questions look alike.

For my experiment I design 3 false questioners, were I tried to influence the respondents answers by triggering some positive and negative emotions with a couple of questions carefully placed right before the question I tried to influence. For the first questioner, who was given to the control group, I used only a simple question.



25. Are you in favour of national service?

Yes

No

**Figure 1:** Form A of the questioner

Source: My own research

For the second questioner, who was given to group B, I used 5 questions before the question I tried to influence.

20. Are you worried about the number of young people without jobs?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
21. Are you worried about rising crime among teenagers?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
22. Do you think our schools lack discipline?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
23. Do you think young people welcome authority and leadership?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
24. Do you think young people like a challenge?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
25. Would you be in favour of national service?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

**Figure 2:** Form B of the questioner

Source: My own research

For the third questioner, who was given to group C, I used 4 questions before the question I tried to influence.

21. Are you worried about war?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
22. Are you worried about the arms race?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
23. Is it dangerous giving young people guns?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
24. Is it wrong to force people to take up arms?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
25. Would you oppose national service?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

**Figure 3:** Form C of the questioner

Source: My own research

The purpose of this experiment is to see if this method of manipulating the polls by leading the respondent to the desired answers really works and if so how much did this influence the end result. The null hypothesis from which I'm starting is that this method of manipulation really works and we can influence people's answers. The alternative hypothesis is that this method of manipulation doesn't work and we can't influence people's answers.

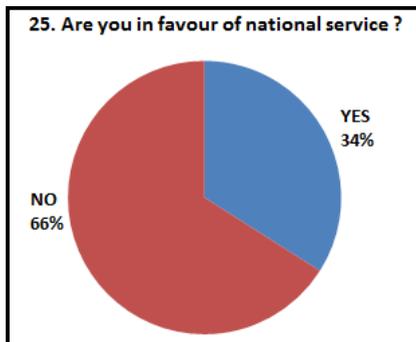
The subjects of the experiment are undergraduate students from Transilvania University of Brasov from all years of study. The numbers of participants in this study is 120, 70 male and 50 female. The participants are very homogeneous, all coming from different backgrounds, 60% of them are from Brasov the rest are from nearby counties temporarily living in Brasov during their studies. They were told that they just have to complete a normal questioner about politics as part of a survey. The questioner contained 45 questions but for this experiment I was only interested in analysing question number 25. The sampling has been done by randomly selecting students from a list of all the undergraduate students from Faculty of Economic Science and Business Administration.

First they were split into two groups of 60 people. The first group participated in the first week of the experiment and the other group took part on the experiment in the second week. This way I tried to see if I can replicate the results of the first experiment. The experiment took place in the first two weeks from February 2013.

The subjects were divided into six groups of 20 people. Two groups (40 people) were the control groups. They were given a standard questioner without any alteration and form of manipulation (form A). Their answers will be compared with the answers of the other groups.

The other groups receive a modified form of the same questioner. Two groups got form B of the questioner and the other two groups got form C of the questioner. After all the data was collected the results were analysed using SPSS software and Microsoft Office Excel.

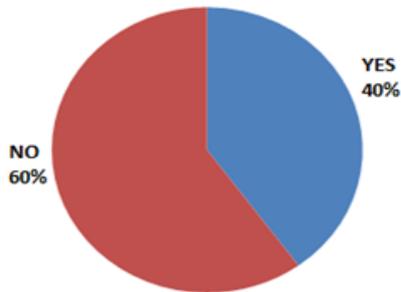
The results of the experiment as we can see from the figure below are: 66% of the respondents from the control group are not in favour of national service, 34% would be in favour of national service.



**Figure 4:** Answers from the control group (group A)  
Source: My own research

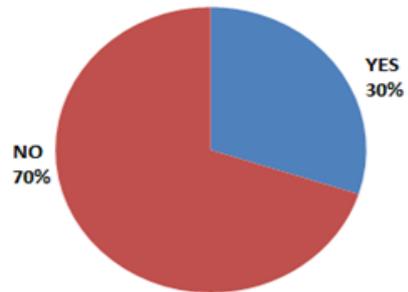
When we analyse the numbers from group B we see that the respondents who would not be in favour of national service have decrease to 60% while the number of respondents who are in favour of national service has increase from 34% to 40%.

25. Would you be in favour of national service ?



**Figure 5:** Answers from group B  
My own research

25. Would you oppose national service ?



**Figure 6:** Answers from group C  
Source: My own research

Source:

Finally when we analyse the numbers from group C we see that the respondents who would not be in favour of national service has increase from 66% to 70% compared with the results from the control group, while the number of respondents who are in favour of national service decrease has from 34% to 30% compared with the results from the control group. Pearson's chi-squared test showed that we can reject the alternative hypothesis and accept the null hypothesis which says that this method of manipulation works and we can influence people's answers.

### 3. "Fake Poll" Experiment

I designed this experiment to see if previous polls have any influence on voter's intentions and behaviour and can manipulate them. In theory when a person has to take a decision that person will search for all the information that he can find in order to make the right decision. One of the easiest ways to find information's about candidates and their programs is mass-media with all its components: printed media, television, radio and internet. Often, candidates use mass-media to publish opinion polls in order to demonstrate their approval among people. When a person is put in front of two groups he tends to go with the majority or the group that has more followers, because he doesn't want to be in minority and this is called bandwagon effect.

According to Oxford Dictionaries bandwagon effect is "an activity, group, movement, etc. that has become successful or fashionable and so attracts many new people". The bandwagon effect is an observed social behaviour in which people tend to go along with what others do or think without considering their actions.

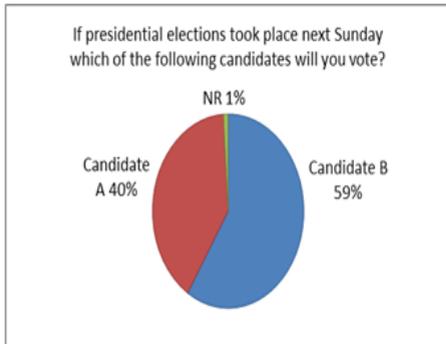
The null hypothesis from which I'm starting this experiment is that this method of manipulation works and we can influence people's answers. The alternative hypothesis is that this method of manipulation doesn't works and we can't influence people's answers.

The subjects of the experiment are the same students from Transilvania University of Braşov from the previous experiment. The numbers of participants in this study

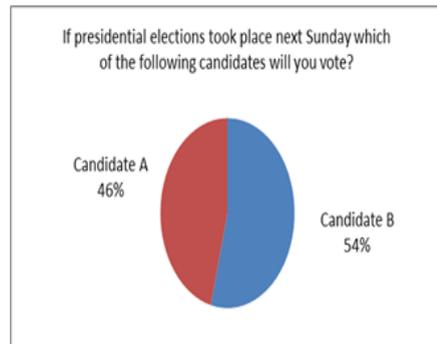
is 120, 70 male and 50 female. The sampling has been done by randomly selecting students from a list of all the undergraduate students from Faculty of Economic Science and Business Administration. They were told that they just have to complete a normal questioner about politics as part of a survey. First they were split into two groups of 60 people. The first group participated in the first week of the experiment and the other group took part on the experiment in the second week. This way I tried to see if I can replicate the results of the first experiment. The experiment took place in the first two weeks from February 2013.

The subjects were divided into six groups of 20 people. Two groups (40 people) were the control groups. They were given a standard questioner of 45 questions without any alteration or form of manipulation. Their answers will be compared with the answers of the other groups.

The other groups received information about the expected winner supposedly from a recent national opinion poll. We assume that are only two candidates left. Two groups got the information that candidate A is the expected winner of the next elections and the other two groups got the information that candidate B is the expected winner of the next elections. After all the data was collected the results were analysed using SPSS software and Microsoft Office Excel.

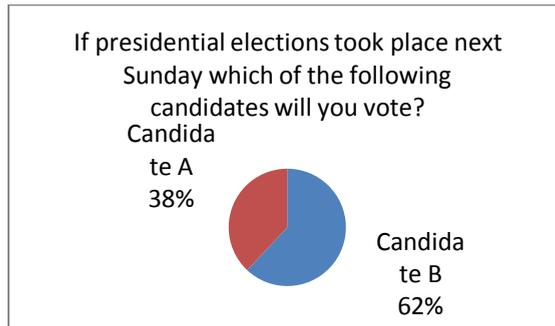


**Figure 7:** Answers from the control group  
Source: My own research



**Figure 8:** Answers from the group A  
Source: My own research

As we can see from the Figure 7, 59% of the respondents from the control group are in favour of candidate B, 40% would be in favour of candidate A and we have a 1% non-response (NR). When we analyse the numbers from Figure 8 we see that the respondents who are in favour of candidate B has decrease to 54% while the number of respondents who are in favour of candidate A has increase from 40% to 46%. Finally when we analyse the numbers from Figure 9 we see that the respondents who would be in favour of candidate B has increase from 59% to 62% compared with the results from the control group, while the number of respondents who are in favour of candidate A decrease has from 40% to 38% compared with the results from the control group.



**Figure 9:** Answers from the group B

Source: My own research

Indeed, approximately 6% of the variance in the vote was explained in terms of the bogus polls, showing that poll results (whether accurate or inaccurate) can significantly influence election results in closely contested elections. In particular, assuming that one candidate is an initial favourite by a slim margin, reports of polls showing that candidate as the leader in the race will increase his or her favourable margin. Pearson's chi-squared test showed that we can reject the alternative hypothesis and accept the null hypothesis which says that this method of manipulation works and we can influence people's answers.

#### 4. Conclusions

Analysing the numbers from "Yes Sir" and "Fake Poll" experiments we can draw the conclusion that this methods of manipulation works very well. Comparing the results from the three groups we can state for sure that we can influence the way people will vote with a percentage from 3% to 6%.

This is due to the so-called bandwagon effect. Bandwagon effect combined with spiral of silence can change some voter's opinions and intentions can increase the percentages for some candidates but it also makes it very hard to quantify on opinion polls and exit-polls thus resulting in large errors.

The limitations of this study are given by the low number of respondents and the way the sample has been selected. Because of the fact that the sampling hasn't been done using a probabilistic method and the fact that the sample is only 120 people, I can't extrapolate the results.

As for future research I will try to find a solution to reduce errors in political opinion polls and exit-polls. I believe that we can accomplish that by doing a more accurate sampling and by moderating the results with a correction factor. I hope we can find this correction factor by analysing the data from previous elections.

#### 5. Acknowledgements

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***SUB-SECTION: ECONOMIC INFORMATICS AND CYBERNETICS***



# ORDERS MANAGEMENT BY USING OF SMART PHONES

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**Abstract:** *The main purpose of this paper is to present an idea of using mobile technology for optimization of orders management inside a restaurant. For implementing this idea we used SQL Server 2008 R2 Express for databases, Visual Studio 2010 Express for Windows Phone for developing the application used from phones, Visual Web Developer 2010 Express for developing web services, Internet Information Server for expose the web services to the internet. The phone application can be deployed to Windows Marketplace, and can be downloaded by any potential user. In this case the application can be used by any client of the restaurant if they will receive a username and a password. The entire process of placing orders can be transferred directly to the client, and can be made with the hardware of the client. More clients means more hardware's which can be used concurrently.*

**Keywords:** *mobile technology; windows phone; order*

**JEL classification:** *C81; C88*

## 1. Introduction

The main purpose of this paper is to present the implementation of an idea to optimize orders management by using smart phones. It was a challenging idea to create a phone application which is integrated with a windows desktop application for bar and restaurants management. Waiters of the restaurant can use two types of devices for writing orders. First method is to use the desktop application for bar & restaurant. The second method is to use a windows phone. Also the client can use his own phone for sending orders. If first method is used the desktop application access directly the database. If the second method is used, the windows phone application access web services, and then the web services access the database. Because orders has to be printed, the desktop application will extract orders received from phones, from the database and then it will print. The entire system was built using free tools from Microsoft such as Microsoft Visual Studio 2010 Express for Windows Phone, Microsoft Visual Web Developer 2010 Express and SQL Server 2008 R2 Express version.

## 2. Arhitecture

The entire system consists of the following parts:

- Database
- Desktop Application
- Web services
- Windows Phone Application

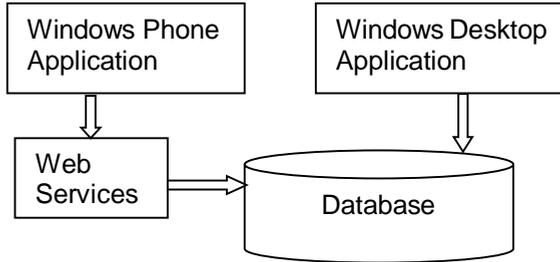


Fig.1. System architecture

2.1. The database was created with a few tables such as *ComandaClient* table used for storing the header of the order, *MiscareComandaClient* table used for storing the details of the order such as product, quantity, and price, *Product* table used for storing description of the products like names, codes, bar codes etc. A part of the database can be seen in fig.

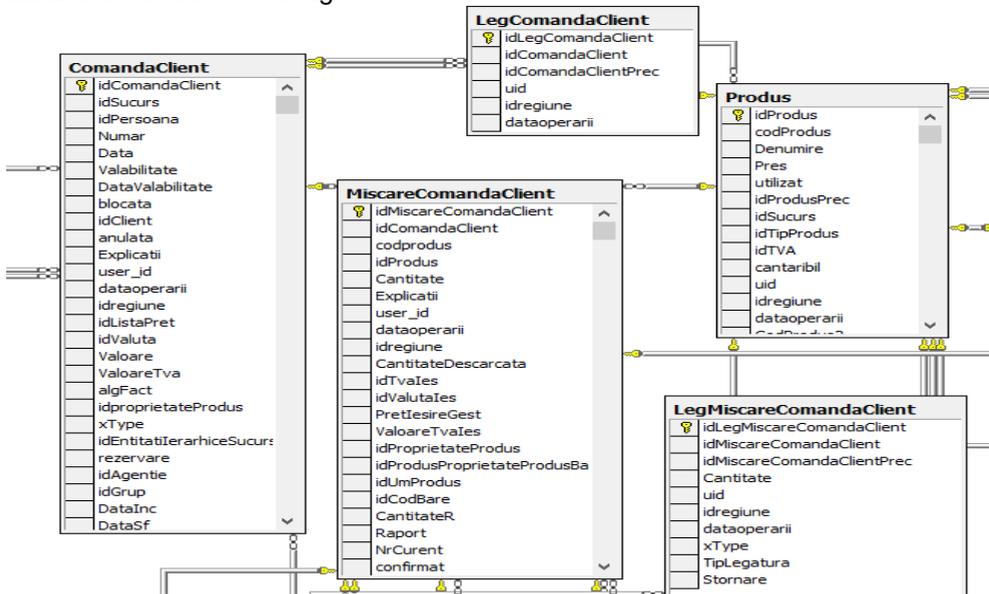


Fig.2. Part of the database

2.2. Desktop application is used for orders input, for printing of the fiscal receipt, orders to the kitchen, orders to the bar, bills. Every waiter based on username and password will choose a table, and place the order on it. Based on that order the desktop application recognize if a product have to be printed to bar or to kitchen, or to any other department which was previously defined and configured.

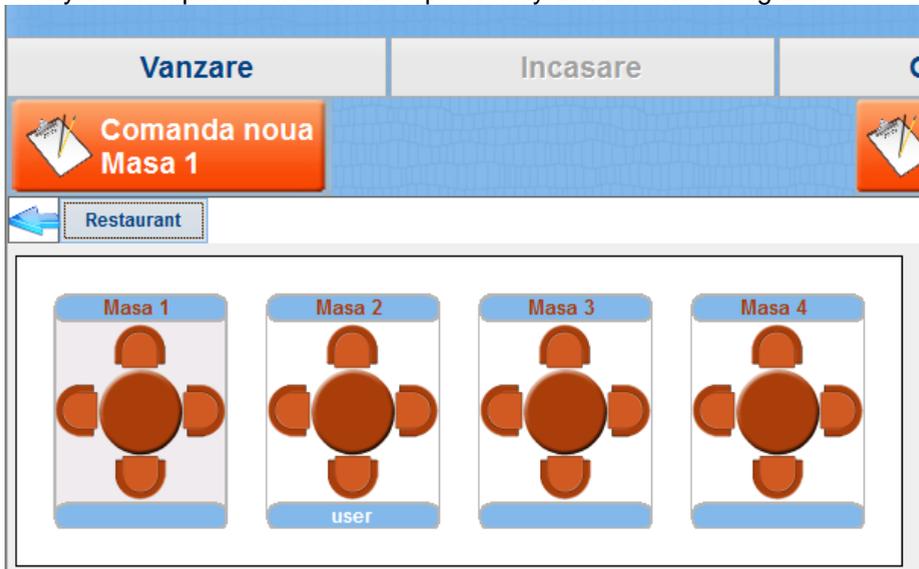


Fig.3. Desktop application. Tables view.

2.3. Web services are used as a bridge between Windows Phone Application and the database. We defined the following web services:

- `string DoLogin(string lcUserName, string lcPassword);` used for verifying the username and the password, and is used for authentication
- `string DoCautaMasa(string lcMasa, string lcUserName, string lcPassword);` used for obtaining an XML string which represent the list of tables which contain the string lcMasa
- `string DoCautaProdus(string CodProdus, string lcUserName, string lcPassword);` used for obtaining an XML string which represent the list of products containing codProdus string in code field
- `string DoCautaProdusDenumire (string lcDenumireProdus, string lcUserName, string lcPassword);` used for obtaining an XML string which represent the list of products containing lcDenumireProdus string in name field
- `string DoAdugaComandaMasa (string lcidEntitatiIerarhiceSucurs, string lcidGestiune, string lcidProdus, decimal lncantitate, string lcUserName, string lcPassword);` used for placing an order on a specified table identified by lcidEntitatiIerarhiceSucurs
- `string DoVizualizareComandaMasa (string lcidEntitatiIerarhiceSucurs, string lcidGestiune, string lcUserName, string lcPassword);` used for viewing of the list with all products contained by an order
- `string DoModificaComanda(string lcidMiscareComandaClient,`

`decimal lnCantitate, string lcUserName, string lcPassword);` used for modifying the quantity of one products contained by an order

2.4. Windows phone application consist of the following pages: MainPage, VizualizareMese page and Comanda page.

*MainPage* is the starting page of application used for prompting the user for login name and password. This page call *DoLogin* web services which confirm if there are a user with the login defined, and if the password of that user is correct or not. In case of a correct user name and password the *VizualizareMese* page is loaded.

*VizualizareMese* page is used for finding a table. This page make calls to *DoCautaMasa* web service. If a table was found, user can select it from a list, and can go to *Comanda* page to put order on selected table..

*Comanda* page used for finding products, for placing orders for those products to a specific table, for modifying the quantity already ordered or for viewing the list of products ordered. This page makes calls to *DoAdaugaComandaMasa* web service for adding products to an order, *DoModificaComanda* web service for modifying the quantity and *DoVizualizareComandaMasa* web service for viewing the order.

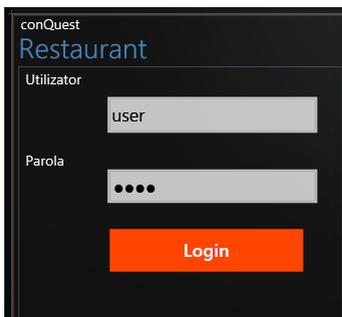


Fig. 4. MainPage

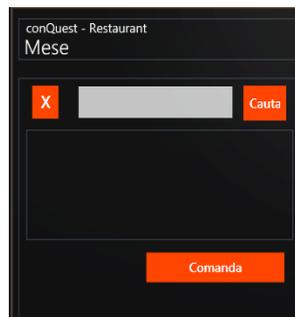


Fig.5. VizualizareMese page



Fig.6. Comanda page

### . 3. Data flow between windows phone application and the database.

One of the main problems which occur in windows phone application (WPA) development is the data transformation. Inside the database data are stored in different fields of different tables and can have different data types like varchar, uniqueidentifier, int, currency and so on. Web services are using the data from the database for different purpose. When WPA needs data, it will make a call to a web services which will make a query against the database and will receive an XML String of data. Then this XML String of data will be send to WPA. WPA is responsible for data interpretation.

SQL Server has the capabilities to transform directly the results obtained for a select statement in XML format. To do this, select statement has to use FOR XML clause.

The next examples show you the presence of FOR XML clause inside a Select statement used for obtaining the list of tables.

```
Select Masa.idEntitatilerarhiceSucurs
```

```

        ,ltrim(rtrim(MASA.Denumire )) as Denumire
        , MASA.X, MASA.Y
    from vVanzare_Mese MASA
    where
        MASA.denumire like '%'
    order by MASA.Denumire FOR XML RAW('MASA'), ROOT('MASA')

```

The result of this query is the following XML string.

```

<MASA>
  <MASA idEntitatilerarhiceSucurs="1AF3C657-DF6E-4463-9059-167D176F886A" Denumire="Masa 1"
X="25.0000" Y="25.0000" />
  <MASA idEntitatilerarhiceSucurs="384ED7E4-3F1A-441E-A0BB-5316C85A3D0B" Denumire="Masa 2"
X="165.0000" Y="25.0000" />
  <MASA idEntitatilerarhiceSucurs="1F701F09-1DA5-4308-A07F-D8C2B87DCAF3" Denumire="Masa 3"
X="305.0000" Y="25.0000" />
  <MASA idEntitatilerarhiceSucurs="39BF7A4D-0641-4A49-82FF-7DB99525C3ED" Denumire="Masa 4"
X="445.0000" Y="25.0000" />
</MASA>

```

This string is send back to the WPA which has called the web service. The WPA will parse the string and create a list of elements. The next example show a method for parse XML String and move the content to a list.

//class definition

```

public class itemListaMese
{
    public string Denumire { get; set; }
    public string idEntitatilerarhiceSucurs { get; set; }
    public string idGestiune { get; set; }
    public string Valoare { get; set; }
    public string UserName { get; set; }
    public itemListaMese(string lcDenumire, string lcIdEntitatilerarhiceSucurs , string lcIdGestiune,
string lcValoare, string lcUserName)
    {
        this.Denumire = lcDenumire;
        this.idEntitatilerarhiceSucurs = lcIdEntitatilerarhiceSucurs;
        this.idGestiune = lcIdGestiune;
        this.Valoare = lcValoare;
        this.UserName = lcUserName;
    }
}

public List<itemListaMese> listMese = new List<itemListaMese>();

```

//parsing XML String

```

XmlReader drXMLListaMese = XmlReader.Create(new
MemoryStream(System.Text.UnicodeEncoding.Unicode.GetBytes(lcResult)));

drXMLListaMese.MoveToContent();
drXMLListaMese.Read();

while (true) {
    if (drXMLListaMese.NodeType == XmlNodeType.Element && drXMLListaMese.Name.ToUpper()
== "MASA") {

```

```

        string lcDenumire = drXMLListaMese.GetAttribute("Denumire");

        string          IcidEntitatilerarhiceSucurs          =
drXMLListaMese.GetAttribute("idEntitatilerarhiceSucurs");

        listMese.Add(new      itemListaMese(lcDenumire,      IcidEntitatilerarhiceSucurs,IcidGestiune
,IcValoare ,lcUserName ));
            drXMLListaMese.Read();
        }
        else
            {
                //deoarece nu s-a gasit in inregistrarea curenta vom forta saltul la urmatoarea
                if (drXMLListaMese.Read())
                    {
                        //se va merge mai departe
                    }
                else
                    {
                        //deoarece nu mai poate citi nimic
                        break;
                    }
            }

        }
        if (drXMLListaMese.NodeType == XmlNodeType.EndElement)
            {
                break;
            }
        }
drXMLListaMese.Close();
.....

```

After the moving of content from XML String to listMese object, that object can be set a datasource for an object used by the user of WPA.

#### 4. Conclusion

After the implementation of this module some immediate advantages can be seen such as:

- reducing the time of the process of making orders by waiters, by operating the order directly at the client table and not on the bar computer through desktop application.
- increasing the number of orders if clients can use their own devices for making orders
- WPA can work together with a desktop application for entire system improvements
- WPA has bad support for printing which has to be compensate by the desktop application

#### Bibliography:

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## WINE ADVISOR EXPERT SYSTEM USING DECISION RULES

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**Abstract:** *In this article I focus on developing an expert system for advising the choice of wine that best matches a specific occasion. An expert system is a computer application that performs a task that would be performed by a human expert. The implementation is done using Delphi programming language. I used to represent the knowledge bases a set of rules. The rules are of type IF THEN ELSE rules, decision rules based on different important wine features.*

**Keywords:** *Decision rules, artificial intelligence, recommendation system.*

**JEL classification:** C41, C61

### Introduction

Expert system represents a computer application that performs a task that would otherwise be performed by a human expert. For example, there are expert systems that can diagnose human illnesses, make financial forecasts, and schedule routes for delivery vehicles, advise people. Some expert systems are designed to take the place of human experts, while others are designed to aid them.

Expert systems are part of a general category of computer applications known as artificial intelligence. To design an expert system, one needs a knowledge engineer, an individual who studies how human experts make decisions and translates the rules into terms that a computer can understand [14].

An expert system is an artificial intelligence tool used to model and aid human decision making in a highly specialized problem domain. Expert systems represent human expertise through a combination of some form of knowledge base and inferencing technique. Some historical uses of expert systems include disease diagnosis, chemical analysis, wine selection, and armored vehicle identification.

The typical expert system receives input describing a problem in its field of expertise, then uses its inferencing technique to extract appropriate information from its knowledge base to produce an answer, diagnosis, or description of a solution. One strength of an expert system is that it can produce a report describing the chain of inference it followed, allowing a human operator to check on the system's reasoning. However, because expert systems are highly specialized, static systems, they can be extremely brittle when presented with novel problems or situations.

Expert systems have a number of major system components and interface with individuals in various roles. The major components are:

- Knowledge base - a declarative representation of the expertise, often in IF THEN rules;
- Working storage - the data which is specific to a problem being solved;

- Inference engine - the code at the core of the system which derives recommendations from the knowledge base and problem-specific data in working storage;
- User interface - the code that controls the dialog between the user and the system.

To understand expert system design, it is also necessary to understand the major roles of individuals who interact with the system. These are:

- Domain expert - the individual or individuals who currently are experts solving the problems the system is intended to solve;
- Knowledge engineer - the individual who encodes the expert's knowledge in a declarative form that can be used by the expert system;
- User - the individual who will be consulting with the system to get advice which would have been provided by the expert.

### Case Study: Application Presentation

I have done a wine advisor expert system. I thought that maybe not many people knows so many things about Romanian wine, that's why I have chosen this field to promote Romanian wine. I have also used in my advisor of wine wines from all over the world. It can be considered a point of start, this application can be much more developed, but, for the moment, I tried to make it easy to manage.



Figure 1. The main window.

When somebody wants to choose a wine, I thought first he/she thinks about what the wine is for, if the wine is to be served as an aperitif (before meal), during the meal (entrée or dinner category), to accompany a dessert or to be used after meal. I think that this is the first thing that somebody is thinking about when wants to choose a wine. The person who wants to be helped to choose a wine I think should know at least this information. So, I extracted the knowledges about wine and I divided then first in these categories. If the wine is to be served as an aperitif then I choose to advise in this field only wines from Romania so I think Romanian wine can be better known. The wine can have full body, medium body or light body. If the wine has a full body then all selected wines are from the Cotnary vineyard. If the wine has a medium body then all selected wines are from Dealu Mare vineyard. If the wine has a full body then all selected wines are from Jidvei vineyard. If the wine has bubbles then it is a sparkling wine, otherwise it is a table wine. All this categories of wines (it does not matter which vineyard do they belong ) can be sparkling or table wine. Then ,when we have all this information depending on the wine colour I can advise the user to choose a specific type of wine by giving a name of a specific type of wine which match the preferences. A wine expert system can be extended more. I am so sorry but in only something around 40 rules my expert system can't be developed extremely much.

If the wine is to used to accompany an entree (it belongs to dinner category) then I have chosen here wines from all over the world and I extracted information about which wine best suits different kind of food. For example, if the wine is to be served with white meat, steak, barbecues, pizza, chinese food, cheese, fish or salad. Then, according to other characteristics ,as the preferred colour, they can be advised to choose a kind of wine. If they want something for dessert, according to the chosen dessert, if it is a fruit of primary fruit dessert the users will be advised to choose a type of wine (a Rougeon wine) and

if it is something very sweet such as chocolate they will be advised something else, so the right choice can be taken. If the

wine is to be used after the dinner then also a specific type of wine will be specified to the user.

I used to represent the knowledge bases a set of rules. For instance: ' if the person wants a wine to be served after the dinner then he/she should choose a Pinot wine. This is an example of a short rule. A rule is, thus, a statement of a relationship, not an instruction. Using a set of assertions, which collectively form the 'working memory', and a set of rules that specify how to act on the assertion set, a rule-based system can be created. Rule-based systems are fairly simplistic, consisting of little more than a set of if-then statements, but provide the basis for so-called "expert systems" which are widely used in many fields. The concept of an expert system is this: the knowledge of an expert is encoded into the rule set. When exposed to the same data, the expert system AI will perform in a similar manner to the expert.

Rule-based systems are a relatively simple model that can be adapted to any number of problems. As with any AI, a rule-based system has its strengths as well as limitations that must be considered before deciding if it's the right technique to use for a given problem. Overall, rule-based systems are really only feasible for

problems for which any and all knowledge in the problem area can be written in the form of if-then rules and for which this problem area is not large. If there are too many rules, the system can become difficult to maintain and can suffer a performance hit. I tried to manage it.

I have done a set of rule and when the algorithm of making a recommendation is applied one rule precedes the other one following the user's desire until a right recommendation is done.

There are two ways in which an inference engine can attempt to apply a set of rules. These are known as 'forward chaining' and 'backward chaining'. In forward chaining, the inference engine starts from known facts and looks at the left-hand 'if' side of the rules, to find any that fit, and then goes on to look for further rules that follow on from those that have been found to apply. In backward chaining, the inference engine starts from the end, from the aim which is sought. So, it starts from the right-hand 'then' side, to find any rules that satisfy the requirement, and works backwards to find what starting conditions are necessary to reach the goal.

In reaching a good option of wine from some given desired from one person, I think the forward reasoning process is the most appropriate.

I have done a user interface which allows the user to choose from multiple answer questions. A dialog with the user is like:

The wine is:

- \*to be consumed before a meal(aperitif)
- \*to accompany an entrée
- \*to accompany dessert
- \*to be consumed after dinner

and when the user makes a choice by clicking one of the buttons then a new page appear for the next step where it can choose another characteristics he/she wants the wine to have.

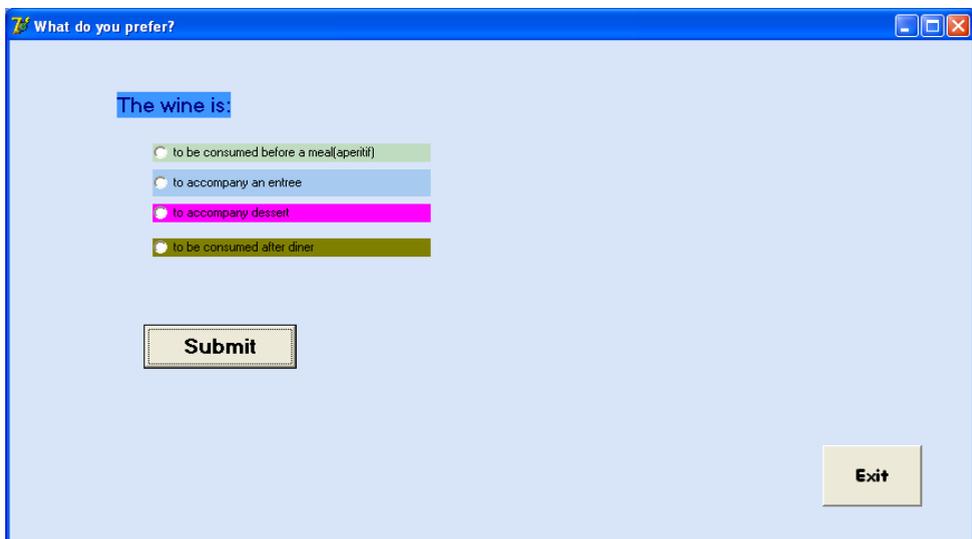


Figure 2. The window with selection' options

## EXAMPLE OF USING MY KNOWLEDGE BASE

I suppose that one person needs help to choose a wine .At the first step he chooses a wine to be consumed before a meal (aperitif), and then he chooses a full body wine and non- sparkling and the color pink. The recommended type of wine is Romanian and the name of wine is Busuioaca Romaneasca .

Applying forward-chaining the result was Busuioaca Romaneasca wine. The rules applied inside of my program to make this recommendation are:

Rule 1 =>Rule 2 => Rule 3 => Rule 9 => Rule 11

Second example :

I suppose that somebody chooses at first step a wine to be consumed be consumed before a meal, a light body wine, non-sparkling and then he/she chooses a pink colour for the wine. Applying forward-chaining the result was "Feteasca Regala" wine. The rules applied inside of my program to make this recommendation are:

Rule 1 => Rule 2 => Rule 17 =>Rule 19

Another example can be:

Somebody wants to choose a wine to accompany an entrée at first step and then he chooses a entrée be white meat and at the next step he chooses the color to be rose. The recommendation in this situation is: Pinot Grisio Rose,Veneto or Cuvee des Amardiens Rosé. Here I have extracted the knowledge about wines from many countries or the same country which can suit a kind of food. The rules applied inside of my program to make this recommendation are:

Rule 21=>Rule 23

I have tried to make many rules from my expert system to be able go one from the other. I have done from some of them, but it is a bit more difficult. All wine expert system I have found online are based on a composite rule to give a recommendation. Here I can give you an example, a link where I have seen an wine expert system and it was also a bit my point of inspiration [9]. I worked hard to do it. It was a bit difficult to separate them in classes but I think now it is well done. I hope you like it.

I have implemented my program in Delphi. I have done a user friendly interface. It is really easy to use it. You can execute my program using "Project1.exe".If you have Delphi program installed on your computer you can see all the source code. Maybe if you don't have Delphi installed on your PC not all the pages will be displayed at their real quality .If sometimes the program does not respond when you try to push a button you must open the program again because it is a Delphi error . It happens sometimes.I can't give you a copy in Notepad with the source code because it is too much.

When you are executing my program, first you can see the welcome page that was presented in Figure 1:

After you click the button "Help me choose a wine" you can go to the next step, the next page will be displayed. It can be seen in "Figure 1" here on the paper.

I have implemented my program by using Radio Buttons and Labels. Each button has in front of him a corresponding label for the choice which can be done. You must click on the button which has near it the choice which best fits your desire. You must make a choice at every page.

For example:

After choosing "to accompany dessert" at the first page the next page is:



**Figura 3. Intermediar decisions**

The user should choose the answer which better fits him/her. When you have click on a button then you can go to the next step by clicking on "Submit" button so a new page will appear.

And then, after this step he/she will go to the next step and so on until the goal is reached and a recommendation of wine is made.

If you have changed your mind and want to exit then you can click on "Exit" button.

This is my wine advisor expert system. I hope it is usefull.

### **USED RULES**

Used rules are:  
APERITIF

RULE 1 [Choosing a aperitif wine]

If [this wine] = "to be consumed before a meal (aperitif)"

Then [a recommended generic wine type] = "aperitif wine"

RULE 2 [Choosing a Romanian wine]

If [this wine] = "aperitif wine"

Then [a recommended generic wine type] = "Romanian wine"

RULE 3 [Choosing a full bodied aperitif Romanian]  
If [a recommended generic wine type] = "Romanian wine"  
[the preferred body] = "full" and  
Then [a recommended generic wine type] = "Cotnary vineyard wine"

RULE 4  
If [a recommended generic wine type] = "Cotnary vineyard wine"  
And  
[a sparkling wine is preferred] = true  
Then [a recommended generic wine type] = "sparkling wine"

RULE 5  
If [a recommended generic wine type] = "sparkling wine"  
Then [a recommended generic wine type] = "Champagne"



**Figura 4. The final recomandation**

RULE 6  
If [a recommended generic wine type] = "Champagne"  
And  
[the preferred colour] = white  
And  
[the preferred body] = "full/medium/light"  
Then [a recommended generic wine type] = "White Champagne"

RULE 7  
If [a recommended generic wine type] = "Champagne"  
And  
[the preferred colour] =pink

And  
[the preferred body] = "full/medium/light"  
Then [a recommended generic wine type] = "Pink Champagne"

RULE 8  
If [a recommended generic wine type] = "Champagne"  
And  
[the preferred colour] = black  
And  
[the preferred body] = "full/medium/light"  
Then [a recommended generic wine type] = "Black Champagne"

RULE 9  
If [a recommended generic wine type] = "Cotnary vineyard wine"  
And  
[a sparkling wine is preferred] = false;  
Then [a recommended generic wine type] = "table wine"

RULE 10  
If [a recommended generic wine type] = "table wine"  
And  
[the colour]=white  
Then [a recommended wine] = " Tamaioasa Romaneasca "

RULE 11  
If [a recommended generic wine type] = "table wine"  
And  
[the colour]=pink  
Then [a recommended wine] = " Busuioaca Romaneasca wine "

RULE 12  
If [a recommended generic wine type] = "table wine"  
And  
[the colour]=red  
Then [a recommended wine] = " Cabernet Sauvignon wine "

RULE 13  
If [a recommended generic wine type] = "Romanian wine"  
and  
[the preferred body] = "medium"  
Then [a recommended generic wine type] = "Dealu Mare vineyard wine"

RULE 14  
If [a recommended generic wine type] = "Dealu Mare vineyard wine"  
And [a sparkling wine is preferred] = false;

[the colour]=white;  
Then [a recommended wine ] = "Feteasca Regala wine"

RULE 15

If [a recommended generic wine type] = "Dealu Mare vineyard wine"  
And  
[a sparkling wine is preferred] = false  
And  
[the colour]=pink  
Then [a recommended wine ] = "Feteasca Roz wine"

RULE 16

If [a recommended generic wine type] = "Dealu Mare vineyard wine"  
And  
[a sparkling wine is preferred] = false  
And  
[the colour]=red  
Then [a recommended wine ] = "Feteasca Neagra, Pinot Noir or Cabernet Byzantium wine"

RULE 17

If [a recommended generic wine type] = "Romanian wine"  
and  
[the preferred body] = "light"  
Then [a recommended generic wine type] = "Jidvei vineyard wine"

RULE 18

If [a recommended generic wine type] = "Jidvei vineyard wine"  
And  
[a sparkling wine is preferred] = false  
And  
[the colour]=white  
Then [a recommended wine ] = "Sauvignon Blanc or Dry Muscat wine"

RULE 19

If [a recommended generic wine type] = "Jidvei vineyard wine"  
And  
[a sparkling wine is preferred] = false  
And  
[the colour]=pink  
Then [a recommended wine ] = "Feteasca Regala wine"

RULE 20

If [a recommended generic wine type] = "Jidvei vineyard wine"  
And  
[a sparkling wine is preferred] = false  
And  
[the colour]=red

Then [a recommended wine ] = "Pinot Noir wine"

RULE 21

If [the wine is to accompany an entree]

Then

If [a recommended generic wine type] = "dinner(entree) wine"

RULE [Is the wine for a white meat entree?] 22

If [this wine] = "entrée wine" and

[the entree] : "white meat"

[the colour]:"white"

Then [a recommended wine] = "Muscat Sec,Samur Blanc or Griffin Vineyards Verdelho"

RULE [Is the wine for a white meat entree?] 23

If [this wine] = "entrée wine" and

[the entree] : "white meat"

[the color]:"rose"

Then [a recommended wine] = "Pinot Grigio Rose,Veneto or Cuvee des Amardies Rose"

RULE [Is the wine for a white meat entree?] 24

If [this wine] = "entrée wine" and

[the entree] : "white meat"

[the color]:"red"

Then [a recommended wine] = "Corbieres 2003,Domain Modelen or Mayor de Castilla 2004,Ribera del Duero"

RULE [Is the wine for a steak entree?] 25

If [this wine] = "entrée wine" and

[the entree] : "steak" and

[the colour]:"white"

THEN [a recommended wine] = "Chateau Agnel 2000,Minervois(France) or Chateau Syrah 2004(France)"

RULE [Is the wine for a steak entree?] 26

If [this wine] = "entrée wine" and

[the entree] : "steak"

[the color]:"rose"

Then [a recommended wine ] = "Busuioaca Romaneasca"

RULE [Is the wine for a steak entree?] 27

If [this wine] = "entrée wine" and

[the entree] : "steak"

[the color]:"red"

Then [a recommended wine ] = "Rosso di Sicilia 2004,Cantine Settesoli(Italy)"

RULE [Is the wine for a barbecues entree?] 28

If [this wine] = "entrée wine" and

[the entree] : "barbecues"

[the colour]:"white"

Then [a recommended wine] = "Riojo Blanco CVNE 2003,Vino Real (Spain) or Chateau Camplazens Syrah 2004(France)"

RULE [Is the wine for a barbecues entree?] 29

If [this wine] = "entrée wine" and

[the entree] : "barbecues"

[the color]:"rose"

Then [a recommended wine type] = "Tamaioasa Regala(Romania)"

RULE [Is the wine for a barbecues entree?] 30

If [this wine] = "entrée wine" and

[the entree] : "barbecues"

[the color]:"red"

Then [a recommended wine type] = "Riojo Tempranillo 2003(Italy),Berberana(Spain) or Protocola Tinto(Spain)"

RULE [Is the wine for a pizza entree?] 31

If [this wine] = "entrée wine" and

[the entree] : "pizza"

[a recommended wine type] = "Chianti wine"

RULE [Is the wine for Chinese Food entree?] 32

If [this wine] = "entrée wine" and

[the entree] : "Chinese Food"

Then [a recommended wine type] = "White Riesling wine"

RULE [Is the wine for cheese entree?] 33

If [this wine] = "entrée wine" and

[the entree] : "cheese"

Then [a recommended wine type] = "Burgundy wine"

RULE [Is the wine for fish entree?] 34

If [this wine] = "entrée wine" and

[the entree] : "fish"

Then [a recommended wine type] = "Chardonnay wine"

RULE [Is the wine for salads entree?] 35

If [this wine] = "entrée wine" and

[the entree] : "salads"

Then [a recommended wine type] = "Bordeau Blanc wines"

DESSERT WINE

RULE [dessert class] 36  
If [this wine] = "is to accompany an dessert" and  
Then [a recommended generic wine type] = "dessert wine"

RULE [Fruit-based dessert] 37  
If [this wine] = "dessert wine" and  
[the dessert] = "fruit or primarily fruit"  
Then [a suggested wine type] = "Rougeon"

RULE [Sweet dessert] 38  
If [this wine] = "dessert wine" and  
[the dessert] = "very sweet such as chocolate"  
Then [a recommended generic wine type] = "Port"

#### AFTER DINNER WINE

RULE [After dinner] 39  
If [this wine] = "to be consumed after dinner"

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# OPPORTUNITIES TO IMPROVE THE MANAGEMENT METHODS OF ROMANIAN ORGANIZATIONS

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**Abstract:** *Information Technology has responded to the crisis by change and innovation. Competitive organizations are permanently prepared to identify the cutting-edge technologies which will change the future in business by using the concept of Business Intelligence. Information Technology is developing rapidly and providing decision makers with large amounts of information that require processing and analysis. Business Intelligence are critical decisions support applications, their role being to provide to management, based on information from the company, a landscape of its situation at some time, but also predictions on the medium and long term. This paper describes the architecture of the Business Intelligence Platform and highlights the benefits of using decision support systems for business applications. Nowadays, company executives require relevant and accurate business information in real-time to take strategic decisions. It is also essential to have freedom to access this information anywhere and anytime. There is a real need to extend this functionality beyond the office and on the fingertips of the decision makers. After a presentation of the concept of Data mining with examples from a case study, the paper focuses on the potential of the IT&C decisional sector, which embeds simulation and assistance tools for managerial decisions. Developing new methods for predictive modelling and application of existing techniques in many areas will be a permanent concern for both researchers and companies that are interested to gain competitive advantages.*

**Keywords:** *decision support system, business intelligence, knowledge discovery in databases, data mining technologies.*

**JEL classification:** *L86, M15, O33*

## **1. Introduction**

The IT researchers' concerns for decision support applications have appeared for over 50 years. Many simulation systems have been developed, making it possible to better exploit the mathematical and statistical programming methods. This formalization effort together with the evolution of new generations of computers and operating systems, have led to the development of the first generation of decision-making tools. The first applications of group decision support systems based on models released in the late '60s. These applications were developed in the '70s and in the early '80s appeared financial planning systems and group decision support systems. Then, starting with the '90s, emerged Executive Information Systems (EIS), OLAP (On Line Analytical Processing) technology and Business Intelligence (BI) applications, continuing with the development of Decision Support Systems (DSS) based on web technologies in the mid '90s, and more recently, the concepts of data mining, text mining, web mining, respectively.

One of the earliest definitions proposed for computer based decision support is “a model-based set of procedures for processing data and judgments to assist a manager in his decision making” (Little, 1970).

In 1992, Kanter said in the paper entitled *Managing with Information* that “DSS is used in less structured problems, where the art of management meets science.”

DSS are “those management information systems that rely on the use of analytical models, specialized databases, judgment and intuition of the decision maker and an interactive computer modelling process, that supports semi-structured or unstructured decision making by managers” (O'Brien, 1999).

The concept of BI appears into IBM Journal in 1958 as “automated system used to disseminate information in various sectors of organizations” (Berta, 2012).

BI are high-level decisions support applications, that provide to management, based on information from the company, a picture of its situation at a moment, but also on the medium and long term, facilitating competent decision making. The BI concepts have ceased to be restrictively considered software applications, these tools are advanced management methods that ensure both organization’s data management and their use as management tools for modelling and forecasting.

## **2. Data Mining and Knowledge discovery in databases (KDD) definitions:**

“We analyze Knowledge Discovery and define it as the nontrivial extraction of implicit, previously unknown, and potentially useful information from data“ (Frawley, Piatetsky-Shapiro and Matheus, 1992).

“KDD is the process of finding hidden information in a database. Data Mining is the use of algorithms to extract information and patterns derived by the KDD process” (Dunham, 2003).

DM is “the extraction of hidden predictive information from large databases” with “sophisticated statistical analysis and modelling techniques to uncover patterns and relationships hidden in organizational databases” (Wang, 2003).

Through the knowledge-discovery process, implicit and potentially useful information is extracted from the raw data (Roiger and Geatz, 2003).

Data Mining is “the process of discovering patterns in data. The process must be automatic or (more usually) semiautomatic. The patterns discovered must be meaningful” (Witten and Frank, 2005).

“The automated or convenient extraction of patterns representing knowledge implicitly stored or captured in large databases, data warehouses, the Web or data streams” (Han and Kamber, 2006).

Analyzing accurately and timely of this large amounts of data is a difficult task, in general, not possible with traditional methods. Ability to analyze and use the massive amounts of data remained far behind the possibilities of storing them. This raises new challenges for businessmen and researchers for the purposes of extracting useful information (Wang, Liao & Rees, 2002).

Increasing accuracy for predictions can save significant amount of money for a company and is a major motivation for using the methods of forecasting and systematic investigation for new models and techniques to improve the current results (Zhang, 2003).

According to market surveys conducted by Gartner Group, at present, the world's leading BI market, with important revenues from the sale of these solutions, are SAP,

Oracle, Microsoft, IBM SAS Microstrategy, Actuate, Panorama Software, TIBCO Software etc. (Petthey and van der Meulen, 2012).

### **3. Confidence in the Data is Key to Business Success**

#### **3.1. The emerging need of Business Intelligence instruments**

In the decision-computer era, competitive organizations are permanently prepared to identify the cutting-edge technologies which will change the future in business by using the concept of Business Intelligence, proposing as objectives:

- Identifying products and services offer in order to retain customer loyalty
- Best possible risk management and activities optimization
- Intelligent exploitation of stored data for being more informed than competitors
- Anticipate opportunities and threats

Most companies and organizations collect data on a large scale. This huge amount of data can be used to extract knowledge that can represent a real advantage to business managers.

The “Business Intelligence” term is being used in the modern business world to fulfil the emerging need of analyzing data from large and variable data sources and this need brought an evolution and a new line of competition between vendors of different enterprise systems. The dramatic trendy evolution in IT field from the last decade and the increased demand of data driven knowledge, large companies have enabled themselves to store an enormous amount of data. However, the request to derive information quickly and to facilitate the decision making process of business organizations, a new set of tools was required, which led to Business Intelligence. BI means the idea of collecting, storing, analyzing and providing access to data and it consists of a set of applications and technologies that support decision making, querying and reporting, online analytical processing, statistical analysis, forecasting and data mining.

This requirement for Business Intelligence applications and technologies has led to the development of BI software. Most major software vendors have launched their own Business Intelligence modules that can be packaged with their software products. Nowadays organizations using enterprise systems are also using the services of available BI software on the market. The functionality of this software is independent of the rest of the modules, but also provides means to seamlessly integrate it with enterprise systems.

In order to identify the BI components, we first need to determine the types of problems are the BI tools designed to solve:

- Structuring data for analysis;
- Analyzing data;
- Creating reports;
- Viewing and sharing reports.

As described above, some components are required to prepare data for analysis, while others are designed for analysis, reporting and sharing.

### 3.2. DSS requires Big Data

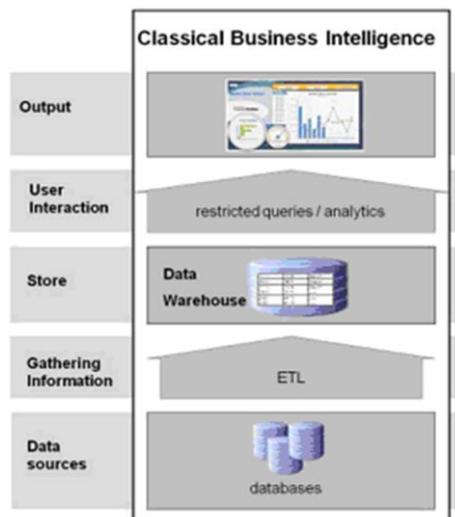
A decision making system requires an overall vision of the Operational Information System. The information it processes is based on the raw operational data, which are subject to processing, that is to the calculations, to which are added different notions of time, location, area, and so on, which can have different meanings depending on the activity field concerned. A common reference system groups elements that can come from several applications, their overlapping representing the memory of the organization.

Enterprises today are beginning to realize the important role Big Data plays in achieving business goals. Concepts like factors that influence a customer to make a purchase, behaviour patterns that point to fraud or misuse, inefficiencies slowing down business processes, now can be understood and addressed by collecting and analyzing Big Data. The insight gained from such analysis helps organizations improve operations and identify new product and service opportunities that they may have otherwise missed. What enterprises need are tools to help them easily and effectively understand and analyze Big Data.

### 3.3. Business Intelligence Platform

Modern Business Intelligence platform should provide an end-to-end infrastructure, solutions and technologies that support following issues, as seen in the figure 1:

- information integration
- master data management
- data warehousing
- BI tools
- repository of best practices and business models



**Figure 1:** The 5 levels of the traditional BI architecture

Source: BI cubist-project, [http://cordis.europa.eu/projects/rcn/95904\\_en.html](http://cordis.europa.eu/projects/rcn/95904_en.html)

### **3.3.1. Data sources**

The data themselves are of two types:

- Operational data from the dedicated transactional processes activities;
- Operational management data consisting of historical data from the activities carried out in a longer period of time, dedicated to strategic management of an organization.

At the operational level, the data is not normalized, there is no conceptual unification. The operational information system can be used to control current activities, but does not allow for long-term decisions, because it does not manage a history of the resulted information. Master data is key business information that may include data about customers, products, employees, materials, suppliers etc. Analysis and reporting is greatly dependent on an organization's master data.

### **3.3.2. ETL (extract, transform, load) tasks**

An Integrated data system is a data collection that gathers consistent data elements from a range of work activities along the continuum of an operational process, stores the data in a coherent way, and is open access by all work activities that require it. Information Aggregation means that from more information with the same semantic side but from different fields is obtained new information, with the same semantic side and a field formed by joining the fields of the processed information.

### **3.3.3. Data storage**

In traditional BI, data is stored in the Data Warehouses, which can be broken down by activity sector in Data mart. The features of the information are stored in metadata dictionaries that describe the semantics, format and rules of extraction.

A data warehouse in Inmon's (1992) concept is a collection of integrated databases, subject-oriented and designed to provide necessary information for decision making. The elements useful for the analysis are stored as tables (relational databases) or data cubes (multidimensional databases).

### **3.3.4. Data analysis**

The search for these valuable information, yet hidden, patterns and relationships within the data is known as data mining.

Business Intelligence provides to organization support to optimally manage information on their so as organization to able to adopt the best decisions for new competitive advantages. In the same time, BI provides users vital information about techniques used in business and thinking of the competitors, their culture, their intentions and ability to implement them.

### **3.3.5. BI Tools for Data Mining**

The BI tools perform the metadata analysis (data about data) to ensure that meaningful data is collected in order to assure a single version of the truth by consistently performing calculations and reporting against the same data.

The combination of analytics and data visualization should be an integrated component of any BI initiative to enable users to explore data, interact with it and apply analytics to understand it. The analysis and presentation tools, the components visible to the end-user, link the production information, the mid-level decision support information and those needed by the enterprise management.

There are other tools that manage the aggregated and normalized data in a specific decision-oriented database, enabling a multidimensional visualization of information, allowing for decision making at all hierarchical levels of the organization: operational control, management control at department or project level and also strategic planning in the organization.

The reporting tool meets the requirements of operational, planning and regulatory reporting, allowing electronic exchange of data between process and business systems to support effective operations management and business process integration.

#### **4. Case study of a Romanian BI solution**

Wizrom Software has released WizWhy application that targets the services sector companies affected by the economic crisis.

The companies that are to change their business partners have a behaviour that can be determined statistically and on which one can create profiles. The proposed solution highlights certain features of the business partner who is about to stop the collaboration, based on the history of the relationship shown in the database. This is just one aspect of the applicability of the data mining solutions for the benefit of the customers. Meanwhile, WizWhy has the ability to also highlight what goes well, so that the management be able to analyze the reasons and act to extend the recipe for success to the whole business.

The operating principle is simple: every company has a database of customers and their business activity. The WizWhy application, the tool we will use as research support for this case study, accesses the database, generating a set of logical rules in which, in addition to quantitative information, qualitative data are also analyzed. The found rules explain with a high percentage of probability why the analyzed results were obtained. Based on these rules, can be highlighted certain profiles used to make predictions. For that matter, the financial services sector, the marketing, market research and insurance are among the main beneficiaries of this software platform.

In addition to the concept of “what if analysis” of the traditional Business Intelligence applications, WizWhy finds on its own those variables that have a significant impact on the results, avoiding subjectivity and can thus detect unusual behaviour of a group of customers through database analysis in order to alert the management. Finding patterns of high-risk companies within financial data enables one to predict to what extent a new customer is risky.

Enterprise Warehouse can reveal interesting phenomena in the data, mainly:

- issuing a summary of the data, reflecting the number of entries, column totals, number of records that meet a set of conditions;
- cases that are exceptions to the rule;
- issuing predictions for new cases starting from the identified rules;
- for auditing purposes: the records that deviate from the discovered patterns in the data might be cases of data entry error or fraud.

Using this BI platform we'll explore the pattern of the first set of data, referred to as training file, and issue predictions for the second data set, the test file.

Sequence of operations:

- First, it opens the data base to be analyzed;
- Second, the working set of data is loaded;

- Once the data set is open, the parameters to be used in the analysis must be defined;
- Analyse the results, trends and reports displayed;
- Generate predictions.

In order to analyse a data set one of the fields should be defined as the dependent variable, while the other fields are considered the independent variables.

A continuous analysis will calculate the specific percent of the dependent variable as a function of the other fields.

The rules that relate between the dependent variable and the other fields are formulated as “if-then” and “if-and-only-if” sentences. On the basis of the discovered rules can be establish the main patterns in the data in order to use them for issuing predictions for new cases.

“Error probability” or “Confidence Level” indicates the degree to which the rule can be relied upon as a basis for predictions (WizWhy Whitepaper, 2011).

Assuming that the data under analysis is a representative sample of an infinite population, the error probability quantifies the chances that the rule does not hold in the entire population and exists accidentally in the file under analysis.

Numeric fields, such as Amount Purchased, are automatically segmented into intervals, and these intervals are the values in the if-then rules. Revealing all the if-then rules is known as the “association rules” method.

Association rule mining, one of the most important and techniques of data mining, introduced in (Agrawal, Imielinski and Swami, 1993) are widely used in various areas such as telecommunication networks, market research studies and risk management, inventory control, web traffic analysis, security on internet surfing, medical research etc.

Various association mining techniques and algorithms are used in order to extract interesting correlations, frequent patterns, associations or casual structures among sets of items in the transaction databases or other data repositories. Association rule mining is to find out association rules that satisfy the predefined minimum support and confidence from a given database.

One of the main challenges of such a method is to validate each possible relationship for a massive data, in a reasonable time-span.

For instance, as we can see in the figure 2, the data we used contain:

- 1,000 records
- 22 fields in each record
- An average of 10 possible values for each field

Cash	Company name	Cost o...	Current assets	Current liabi...	Dividend	Equity...	Goodwill ...	Industry
10,80	ArcelorMittal Roman	1430,40	1267,70	973,40	0,00	380,20	280,80	0121 - Iron & Steel
494,30	UPC Romania	1572,70	2830,60	982,10	0,00	2112,60	358,80	0915 - Communications Services
0,00	Ecosal Ltd.	10,90	3,10	6,80	0,00	-3,30	0,10	0975 - Waste Management Services
36,20	WMC Ltd.	880,70	755,40	658,30	0,31	2781,20	0,00	0124 - Metal Mining
0,30	ING Bank				6,00	8,00	0,00	0730 - S&Ls/Savings Banks
0,10	Still Co	6,30	2,60	3,70	0,00	3,40	4,60	1006 - Computer Hardware
0,60	Hiperdia		0,80	1,50	0,00	0,20	0,00	0803 - Biotechnology & Drugs
7,40	Technautic	110,20	56,90	32,20	0,00	24,80	0,00	1024 - Electronic Instruments & Co...
144,50	Viata Libera	994,10	1374,20	1699,60	0,08	424,20	353,90	0903 - Advertising
2,50	MediTest, Inc.	18,80	14,40	5,00	0,00	52,10	32,00	0812 - Medical Equipment & Supplies
3,40	Nexial.ro, Inc.	0,00	3,50	0,30	0,00	3,50	0,00	0963 - Retail (Specialty Non-Apparel)
12,50	Hobby Tour	91,80	59,30	49,20	0,00	76,80	49,20	0430 - Recreational Products

**Figure 2: Basic data loading: Customers.mdb**  
Source: own compilation

When a data set is opened, it is displayed in the WizWhy work area, as follows:

	Field Name	Field Type	Analyze if Empty	Ignore Field	Dependent Variable
2	Company name	Category	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Cost of goods sold	Number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Current assets	Number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Current liabilities	Number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Dividend	Number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Equity (common)	Number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Goodwill and intangibl	Number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Industry	Category	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Liabilities and equity	Number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Long-term debt	Number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Figure 3: WizWhy Analyzer work area displays the tabbed dialog boxes**

Dependent Variable: Sales

The total range of the Field's values is: 0,10 - 111.630,00

Average: 1.355,39    Standard Deviation: 6.491,88    Median: 73,40

Select the range of values to be analyzed in the rules [Boolean analysis]:

Predicted Value:  More than: 1000    Frequency: 15.83 %  
 Less or equal than: 111630

Minimum probability of if-then rules: 22 %  
 Minimum probability of if-then-NOT rules: 91 %  
 Minimum number of cases in a rule: 100 10.0%  
 Maximum number of conditions in a rule: 3

Search for Unexpected Rules     Re-display Rule Parameters after reading the data.

**Figure 4: Settings the rule parameters: Sales>1000 and cases in a rule>=100**  
Source: own compilation

For the prediction: 'Sales is more than 1.000' when the Issue Rules button is pressed the following summary report is generated:

Summary Report:

C:\Customers.mdb

Total number of records: 1000

Minimum number of cases in a rule: 100

Dependent Variable: Sales

Predicted Value (analyzed as Boolean): more than 1.000,00

The total number of case explained by the set of conditions: 928.

The total number of cases in the data: 935.

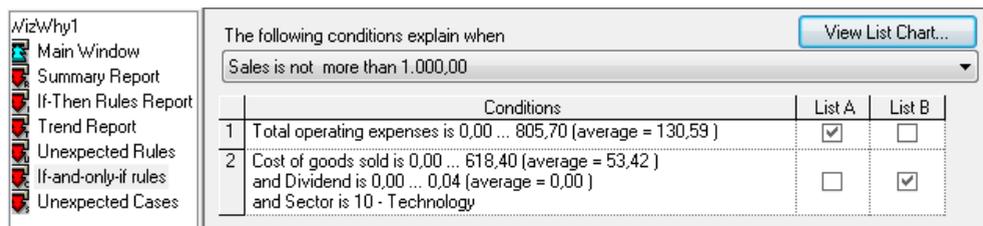
Average probability of the predicted value is 0,158.

When performing an analysis on a database of clients in order to discover the rules of loyalty winning, the first step is to identify the basic rules and trends. Parameters are calculated, representing the "importance" of each field to identify customers who are likely to head for the competitors.

If-then rules represent sufficient conditions (the "if" condition is a sufficient condition for the result). If-and-only-if rules go one step further: they represent necessary and sufficient conditions.

Obviously such a relation cannot be accidental, and therefore might be relied upon when issuing predictions. Indeed, when WizWhy reveals if-and-only-if rules it takes them into account when issuing predictions for new cases.

"If-and-only-if" type of relationship offers a higher degree of safety and is considered in order to develop predictions, as we can see in figure 5:



**Figure 5:** "If-and-only-if" relationship discovered for the given parameters and data  
Source: analysis performed with WizWhy

In the previous example, the two conditions, (1) and (2), are necessary and sufficient conditions for the dependent variable 'Sales' being less than 1.000. If at least one of them holds there is a high probability that the Boolean analysis 'Sales grater than 1.000' is false. If the two of them do not hold, there is high probability, respectively 0,961 (147 out of 153 cases) that the condition 'Sales is more than 1.000' is true. In the second if-and-only-if rule above, the first condition refers to the case where the value in the Cost of goods sold field is the interval between 0 and 618,40. The platform employs a unique algorithm for the optimal segmentation of numeric (continuous) fields.

## 5. Conclusions

The organizational repository of enterprise wide data across the lines of business contains massive and integrated data and represents the complete organizational view of information needed to run and understand the business.

This unprecedented development of IT technologies has led to different changes in the business environment: the appearance and development of knowledge-based organizations, and of the knowledge-based management within the organizations. Within the total resources of a knowledge-based organization, the informational resources register a spectacular dynamic.

Both the explosive growth in the amount of information inside companies, and the rapid evolution of IT equipments, determine more and more companies to adapt their strategies. Due to the diversification of the type of data to be stored, companies need a new way to manage unitarily both their applications and data files, thus adapting themselves easier to the market dynamics.

The IT resources are now becoming the engine of successful enterprises, representing not only the operational base, but also the means for marketing and communication strategies. At the same time, organisations must review the relevance of knowledge management to operational managers.

The knowledge-based organizations are able to gather, extract, label, organize process and share knowledge to make superior performances possible: better business solutions and decisions, a better collaboration and share of information.

In order to face new challenges, the companies must improve their digital and technological knowledge capacities, even during crises or financial restraints.

New software applications accelerate the decisional process in this big data era. Important IT companies announce the launching of new software applications that offer clients a complex method to decrease the big data volume and to speed up the business processes, by making it easy to obtain useful information.

Companies that have deployed data visualization solutions to help derive value from Big Data are finding that there are behind-the-scenes benefits to using these tools. Not only does the combination of strong analytics and data visualization give users the power to make the right business decisions, it also facilitates the joining of different disciplines within an enterprise to help solve business problems.

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## ERP ASSIMILATION: AN END-USER APPROACH

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**Abstract:** *One premise of this paper is that ERP implementation is an “organization wide revolution” because a large number of changes happen. Unfortunately, after 20 years of experience, many implementations of ERP systems take longer and cost more than projected or even fail. As many authors stated, one major cause appears to be that organizational issues are neglected or underestimated. In this type of IT project the organizations confront with many problems because they put inadequate stress on the management of change brought about by the technology. We consider that the success of the implementation depends highly on the company’s openness to change. Change is not always welcomed by end-users, so the first step is to ensure that the executive management supports the team’s vision, the vendor selection and the implementation project from beginning to completion. When an ERP software provider is selected, it should display the qualities and be prepared to act as a “change agent”, one who can explain short-term and long-term benefits of the proposed changes, while being sensitive to each end-user’s level of change acceptance. Our study was focused on the end-users behaviour and perception.*

*The paper discusses the ERP adoption based on the IT assimilation theory. The ERP lifecycle is associated with the IT assimilation steps. We propose a distribution of these steps along the lifecycle. Derived from the findings in the reviewed literature we will focus the cultural factors, in particular those related to the end-users (determined as a major impact factor in our previous study: Negovan et al., 2011). Our empirical study is centred on the end-users perspective and it tries to determine if and how their behaviour affects the achievement of the ERP assimilation steps. The paper reasons that organizations that understand the IT assimilation steps correlated to the ERP implementation critical factors are more likely to implement and use ERP successfully.*

**Keywords:** *ERP, IT assimilation, change management, end-users, resistance to change.*

**JEL classification:** *L86, O32, O33*

### 1. Introduction

In order to respond to the imperative of reducing costs while expanding business and improving customer services, companies abandoned the legacy systems and turned to integrated systems. The end of 20th century brought Enterprise Resource Planning (ERP) – a new generation of innovation management software to support business processes, but also to move on the culture in an organization. During the 1990s costly ERP software was adopted mostly to improve and integrate many (possibly all) business processes (Jacobs et al., 2003). When the organization

began to understand the full-power that the ERP system can deliver and understand the need to extend the ERP system, it gained better business value, with tighter collaboration with customers, suppliers, and ultimately, end users (Wallace and Kremzar, 2001). At the same time, many authors (Davenport, 2000; Nah, 2001) pointed out the ease of failure, raising the need of analyzing the factors that lead to successful ERP implementations. Identifying factors leading to success or failure of ERP projects became a remarkable topic in the 2000s literature (Sumner, 2000; Bingi et al., 1999; Bahmanziari, 2004; Markus, 2000 to mention but a few). Furthermore, the technological context evolved essentially making the state of affairs even more complex and the ERP systems more innovative than ever and their assimilation more challenging. Our assumption is that implementing an ERP system is a complex process and is likely to be a radical technological innovation, necessitating not only technical expertise, but also a range of organizational adaptations in a well performed change management process.

## **2. ERP assimilation and change management**

Implementation of an innovation is a dynamic process of adaptation. As reported in the literature, adoption of an ERP is a challenging and complex organizational learning and change management process (Kumar et al., 2000; Markus et al., 2000; Davenport, 2000; Nah et al., 2001). Therefore, the success of the implementation depends highly on the company's openness to change. Change is not always welcomed by all individuals, so the first step is to ensure that the executive management supports the team's vision, the vendor selection and the implementation project from beginning to completion. When an ERP software provider is selected, it should display the qualities and be prepared to act as a "change agent", one who has the ability to lead the company confidently and rapidly through the change process, one who can explain short-term and long-term benefits of the proposed changes, while being sensitive to each employee's level of change acceptance.

The ERP implementation's ultimate success is more than the effective IS implementation. As some authors pointed out when talking about information system success (Kwon and Zmud, 1987), the ERP system should be integrated and embedded in the organization and its culture before it can generate business value. The most noticeable aspect is related to the user acceptance. Practice revealed that one major ERP implementation problem is the lack of commitment, acceptance and readiness of users to deploy the system (mentioned as a major failure issue in many papers). The mentioned explanations include: lack of ERP product knowledge and of appropriate users' training, insufficient internal expertise, deficiency of education about the system's benefits and usefulness, lack of support documentation (Markus et al., 2000; Loh and Koh, 2004; Gargeya et al., 2005).

### **2.1 The concept of IT assimilation**

Founded on this line of reasoning, the ERP implementation should be also analyzed in terms of organizational IT assimilation. Based on Merriam-Webster dictionary, one good definition for assimilation is "the process of receiving new facts or of responding to new situations in conformity with what is already available to consciousness" (<http://www.merriam-webster.com/dictionary/assimilation>). We consider this approach to be consistent with IT (ERP in particular) assimilation,

rather than another frequently cited definition which says that “IT assimilation is an important outcome in the efforts of firms to leverage the potential of information technologies in their business activities and strategies” (Armstrong and Sambaburthy, 1999). We also agree with Purvis et al. (2001) that consider IT assimilation as the extent to which the IT becomes routinized and embedded in the organization’s business processes and value chain activities. ERP assimilation is the process which extends from the early awareness of the ERP initiative to its wide-scale organizational deployment. Fichman (2000) describes an IT assimilation process with the following stages: awareness, interest, evaluation, trial, commitment, and deployment. Another point of view (Cooper and Zmud, 1990; Gallivan, 2001) is based on the diffusion of innovation theory (Rogers, 1995) and identifies six stages of organizational IT assimilation: initiation, adoption, adaptation, acceptance, routinization and infusion.

In the first stage, the need to change emerges and an IT project – an ERP system in our case – is initiated. **Adoption** happens when a key person in a managerial position sustains and rationalizes the ERP project in terms of benefits and expected results. Here is where the change effort is engaged: priorities are realigned and necessary resources are authorized. The **adaptation** phase prepares the organization for the technological innovation and it is based on openness and determination in accepting the change. In case of ERP, this phase has two big challenges: the business processes reengineering (BPR) and the users’ resistance to change. BPR is supposed to align the organization’s business processes with the ERP system while pursuing to maximize the operational efficiency. In order to do the BPR, the managers should have a vision and a commitment to see the change through. A knowledge transfer from inside the organization to the vendor’s analysts takes place. For that reason the users’ resistance to change needs to be overcome. Two directions should be tackled: the need for change and the desire for change. Therefore, the users’ training starts with their education about the need for the new system, its implications (design and definition of the new processes) and its benefits. In the final part of the ERP implementation, in the fourth stage of IT assimilation, the focus of training moves to the understanding of functionality of the software, through the transfer of knowledge and skills about the application exploitation. The **acceptance** of the users should be achieved. Tactics such as communication and participation (users’ involvement) are beneficial here more than in the other stages. At the ERP’s go live moment, users should be committed to the new technology, their attitude should be a fair one, and their work habits should be changed not only because they have assessed the required knowledge and skills, but they have agreed to the change. The fifth stage of **routinization** and the last one of **infusion** take part in the post-implementation time. While mastering better the new technology utilization, they transform it into routine and they shift understanding to a new level of competency.

## 2.2 The ERP assimilation – phases and critical factors

Considering the ERP lifecycle (see Figure 1), there is a discussion related to the connection of the IT assimilation stages with the ERP project phases.

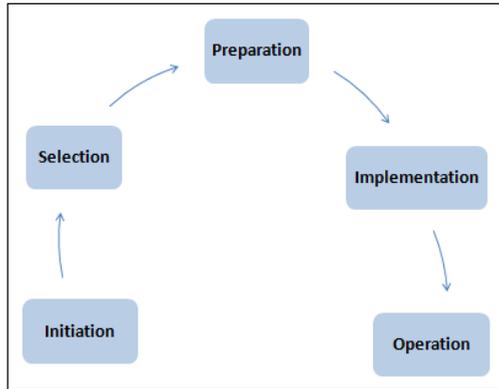


Figure 1. ERP project stages

Some authors (like Bajwa et al, 2004) are correlating the stages from the beginning (Figure 2a), while others (Cooper and Zmud, 1990) are placing the IT assimilation steps in the last part of the ERP project, continuing in the post-implementation phase (Figure 2b).

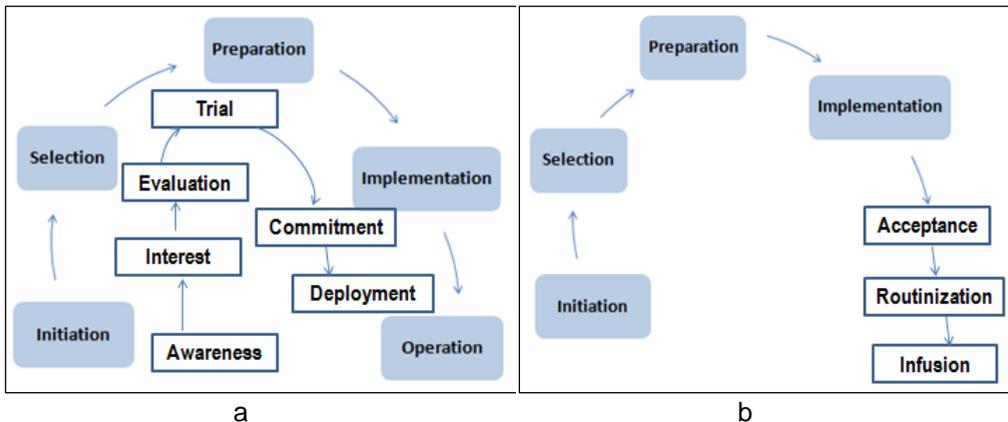


Figure 2. ERP project stages and IT assimilation steps

In our opinion, in the case of ERP assimilation, the picture from Figure 2b should be amended by introducing the opening steps in the first part of the project and by moving the acceptance step before the go live moment, continuing in the post-implementation phase with routinization and infusion (see Figure 3).

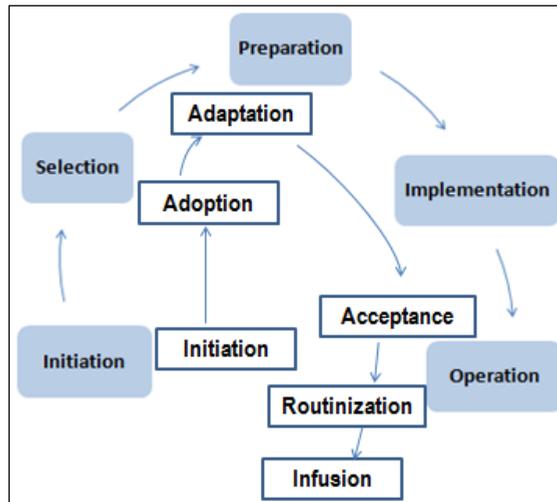


Figure 3. ERP project stages and IT assimilation steps during the entire ERP lifecycle

The ERP implementation is a project orchestrated by three parties: the client organization, the vendor, and an organization aiding the implementation (the consultant). In small and medium-sized projects the vendor is also carrying on the implementation. Generally, the vendor carries the burden of the ERP project success, everyone expecting him to have all the necessary knowledge and skills to conduct and control it. Experience shows that with all the expertise in the world, great reputation and credibility, the ERP project might fail. The explanation is quite simple: business-related outcomes are only partially related to the system implementation itself or, in other words, because of the knowledge gap. In the literature review on factors that potentially affect ERP implementation we found some studies about knowledge integration/diffusion. They all explore the process of knowledge integration and they agree on the difficulties and importance of integrating the knowledge of all parties that take part in the implementation (Sumner, 2000; Soh et al., 2000) and some of them identify impediments which prevent participants from transferring their knowledge successfully (Huang et al., 2001). Far less discussed is the importance of the knowledge held by the beneficiary. It is commonly recognized that the client has the best knowledge of its particular business processes, organizational issues, as well as the competitive situation. We believe that the knowledge transfer takes place both ways in the interaction between the users and the implementation team.

A significant factor for the ERP assimilation, revealed in each and every paper on ERP implementation analysis is users' resistance to change, derived from the organizational change and related to the organizational culture. Some cultures are more conducive to change than others, since a culture where everyone works together is likely to stimulate change more successively than one that is characterized by internal strife (Harwood, 2003). The group of people that form an organization share "philosophies, ideologies, values, beliefs, expectations, attitudes, and norms" that keeps them together (Kilmann et al., 1996). But culture can change, or hopefully, it evolves over time to an improved state. Top

management team promotes a vision and leads or indulges the cultural change. In an ERP implementation, their involvement and sustained support through all the phases help ensuring change management and eliminating resistance to change (Nah et al., 2003; Somers and Nelson, 2004; Al-Mashari et al., 2003; Dezdar et al., 2011). Maditinos et al (2012) consider that top management should ensure user support in order to achieve a successful ERP implementation. They identified several ways to obtain such an outcome, as follows: users should be able to express their point of view on the necessity to implement the solution, users should be able to express their opinion about the specification of the future system, users should be able to actively participate in the implementation process and users should be rewarded if the ERP system will be used with success.

### 3. ERP assimilation – a survey in a Romanian public university

Based on the literature review and on the ERP assimilation steps as illustrated in Figure 3, we will analyze the ERP assimilation from the end-user perspective. The survey was conducted in a Romanian University, a public organization, which finished the implementation of an integrated information system 18 months ago (October 2011). The users belonged to the administrative staff (secretary position); they are using the same module of software, so they have the same experience of adopting a new technology. In a total number of 57 users with similar positions in different faculties, we have questioned 20 users, in three different faculties.

Table 1. Evaluation of the ERP assimilation steps in the studied organization

Assimilation steps	Factors	Evaluation criteria	Result
Initiation	X	X	X
Adoption	Organizational culture IT education &knowledge	Openness to change Top management commitment	Not succeed
Adaptation	Change management	Top management commitment Level of knowledge before implementation	Partially achieved
Acceptance	Users' resistance to change	Knowledge transfer	Partially achieved
Routinization	Users' digital competencies	Level of knowledge after implementation Users' satisfaction	Achieved
Infusion	X	X	X

As described in Table 1, our survey focused some factors we considered relevant from the end-users' point of view. For each factor we had some evaluation criteria (covered by the questions in the survey). The last column established the result for each step of the assimilation process.

*The adoption step (Q1, Q2).* We aimed to find out whether the end-users were asked if they would agree or disagree with the implementation of the new system, and the

results were astonishing: only 5% of our population was informed of the changes to come and their opinion requested. The decision was taken at the management level. At the time users were officially announced about the new project, their opinion was negative, unenthusiastic, and even pessimistic: almost 60% thought it was definitely another software application they will have to learn, and only 20% considered it the best IT solution of the department they worked in.

*The adaptation step (Q5, Q3).* Considering the results of our study we can assert that top management didn't ask the end-users about their opinion about the new ERP system and didn't create and maintain communication channels with them. 80% of the interviewed end-users indicated us that the dean or vice dean and the IT manager didn't help them at all to understand or use the new system. They consider to be supported the most by the internal consultants (85%) and their chief secretary (40%) and they were really counting on each other while 55% declare to understand the new system from the other colleagues.

A factor with positive effect in this step of ERP assimilation is a good level of knowledge, the end-users should be at least PC literate. In the studied organization, based on the results determined, we found that end-users have high levels of knowledge of using specialized office software, like MS Office Word and MS Office Excel, and their PC skills are more than above average, while 55% declare to have an excellent knowledge level.

*The acceptance step (Q6).* In this project, the end-users interacted with the ERP vendor consultants and the internal consultants. They revealed us that the vendor consultants didn't help them neither understand how the system works or how they can use it. Over 65% of the end-users felt that external expertise didn't act as allies in this rough road to assimilate the ERP system. On the other hand, over 90% of the end-users believe that the internal expertise was exploited to its maximum. The internal consultants were always present when they needed to understand how the system work in order to fulfil their task and when they needed support on how to use it in their daily job routine. Likewise, the support in using the new system should have been granted by the direct hierarchical manager, in our case the chief secretary (35%) or by the colleagues with similar position. Again 55% of the responses indicate that they count on their colleagues support and only 15% declare they did not ask questions to their co-workers.

*The routinization step (Q7, Q4).* The new system was assimilated, even though the users still have a disapproving belief with 10% considering that that system needs to be replaced. 60% of the users that considered in the beginning that the new ERP was just another software application to learn are thinking now that it is a solution that can be successfully used, but still needs some changes to be made in order to be the perfect software for their needs. Moreover, the percentage of those who assumed that the new information system is the best solution has increased by 10%, reaching now 30% of the interviewed population. 35% of interviewed users considered their digital competencies improved, while the rest considered they remained at the same level – a positive situation overall.

**To sum up**, the new ERP system was assimilated in the end, but the process took longer than anticipated and it had difficult instants, especially in the first part of the project. If the perception of the users would have been different, they would have accepted the change naturally, they would have been open to communicate with the vendor's consultants and, of course, open to learn.

#### 4. Conclusions

ERP implementation is a major change process that includes all areas of an organization, and the most important aspect is the human resource. Change isn't always desired by all the people in the organization, but it is important that executive management to be involved in this process from beginning until the final stages. The top management has to have the ability to explain the benefits of such a solution and to support an easier transition from the existing system to the new ERP based information system.

Our case study had a happy end eventually, but a lot of time and money could be saved with a different approach of each ERP assimilation step. The users' adversity discontinued the activities and obstructed the knowledge transfer to the vendors' consultants who were confronted with strong disagreement and even hostility. We could not establish which the exact determiners for their behaviour were, and this might constitute an objective for further research, along with a correlation analysis within the sample. However, we know that they reside in the organizational culture, a wide-ranging factor with the highest influence in what seems to be a technological project.

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## STUDY REGARDING THE USE OF MICROSOFT EXCEL SOFTWARE IN THE MARKETING ACTIVITY OF THE BIHOR COUNTY COMPANIES

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**Abstract:** *Marketing activity involves many decision situations. They may have a lower or higher complexity, but all involve organizing, processing, extracting and analyzing of a large volume of information. By using specialized software that provides tools for analysis, company managers can quickly obtain significant information about market. They can also get overview, synthesis of certain aspects of company activities. In the data analysis activity traditional methods and software tools can be used, such as: dispersion analysis software, multi-factor techniques, regression analysis software and data-series analysis software, useful in data-series analysis in their trend format, seasonality and of the other dynamic series components. But if a more complex economic analysis is demanded, where the information is needed to be presented in the form of diagrams, is necessary to use specialized software tools for analysis, such as those offered by spreadsheet applications. Of those who know and use spreadsheet applications for drawing up the reports necessary for carrying out the work, many use the Microsoft Excel. Using Microsoft Excel software, data can be organized and processed quickly, accurately and thoroughly. Also, the facilities for the extraction, aggregation and analysis bring real value to a business activity. From the same volume of processed data a higher volume of complex and diversified information can be obtained, thus offering a more complete picture on the analyzed decisional situation in its entire. For this reason we conducted a study in which we sought to obtain information on how these applications are used in the marketing activities of companies. Microsoft Excel software is used a lot in marketing activities of companies in Bihor County, but data analysis tools it provides are used too little. Collected and stored data are not used to their full value. In this way, companies do not have information that could help to better understand customer behavior and market products.*

**Keywords:** *data analysis; spreadsheet software; economic analysis activity*

**JEL classification:** M21; C83

## **1. Introduction**

Marketing activity involves many decision situations. They may have a lower or higher complexity, but all involve organizing, processing, extracting and analyzing of a large volume of information (Popa and Sasu, 2008). By using specialized software that provides tools for analysis, company managers can quickly obtain significant information about market, costs, prices, sells, market promotion and emergence on specific geographic areas, consumer categories. Also, one can get overviews, image synthesis of certain aspects of dynamic activities such as monthly or quarterly growth in sales of a certain product groups in a given geographical area, profit made in a given period of time (week, month, quarter) by selling a product type.

Low-end tools of data analysis provide opportunities for simple queries, being useful for people who need a quick-reference to the databases information. Powerful tools for data analysis, such as multidimensional analysis, allows performing complex analysis (Han and Kamber, 2006), capitalization of the information found in databases for effective decision making, both at the strategic and technical levels (Soares, Peng, Meng, Washio and Zhou, 2008). They provide the possibility of data consolidation, of complex spreadsheets use, which allows grouping of rows and columns expressing different dimensions and different levels of aggregation, and of the aggregation level change, needed to determine the optimum level of granularity for analysis. They can be successfully used in marketing for: the analysis of products, sales, company's customers and suppliers, market segmentation, risk analysis, forecasting customer preferences, attracting new customers, and so on.

For different reasons some companies are opting for a summary analysis of data, while others for a complex analysis of the data. For this aim traditional analysis software tools or specialized analysis software tools are used.

Many companies use spreadsheet applications for inventory, data processing and analysis, useful for marketing activities. Microsoft Excel software is used by many of those who know and use spreadsheet applications for drawing up the reports necessary for carrying out the work.

## **2. Tools offered by Microsoft Excel software**

Using Microsoft Excel, data can be organized and processed quickly, accurately and thoroughly. Also, the facilities for the extraction, aggregation and analysis bring real value to a business activity (Nagy and Vizental, 2009). From the same volume of processed data a higher volume of complex and diversified information can be obtained, thus offering a more complete picture on the analyzed decisional situation in its entire.

Facilities offered by the Microsoft Excel software are used differently by different companies.

For example, in some companies Microsoft Excel software is used only for recording data as spreadsheets by using simple formulas and common functions. Mainly, a person compares current month data with data on the previous month and decides what to do in the month which follows. These companies are devoid of vital information that might help them better understand, for example, customer behaviour or market behaviour.

For other companies, computing power and data analysis provided by Microsoft Excel software is used to a large extent. Using tools to organize, aggregate, statistic processing, modelling and data analysis provided by spreadsheet application, these

companies can make complex economic analyses that provide benefits for the case of rapidly changing market environment.

Managing data in the form of spreadsheets makes them be easily found. Worksheets for a customer or supplier may be suggestively named and stored in a single spreadsheet, thus information being easily located. Complex mathematical, statistical and financial calculations can be made, data lists can be efficiently processed, suggestive reports that contain different levels of detail and also charts can be created, analysis and forecasts leading to the best decisions can be made (Johnson, 2008).

Microsoft Excel software provides efficient solutions to many situations for a business activity. Using the tools it offers, following activities can be made:

- Summary tables without levels of detail, based on data stored in different spreadsheets. They can be used, for example, to obtain a quarterly summary on monthly expenses (Taylor, 1999).
- Filtering, which allows to quickly find and highlight information that meet certain criteria. They can be applied for example, to the costs lists in order to obtain the desired information quickly.
- Sorting, which allows organizing data in a logical manner. They can be used, for example, to present costs lists in a suggestive manner.
- Subtotals of a data list. They allow the creation of a summary containing details that can be shown or hidden as needed. May be helpful in expenses analysis.
- Pivot tables that offer great flexibility in data presentation (Jacobson, R. 1997). Allow organizing data stored in multiple spreadsheets, show or hide details, change in the pattern or level of detail displayed. For example, costs can be displayed by categories and quarters.
- Charts. They show visual data and the relationships between them, allowing quick understanding of their meaning. They are used to calculate a trend series data, such as monthly sales over a period of time, and to predict future sales
- What-if analysis which evaluates various possibilities for the cases when one, two or more factors influences the values of the results. (Lacurezeanu and Buchmann, 2009) They can be used, for example, to analyze the way in which the number unit sales, unit price, advertising expense affect a company's profits.
- Analysis of situations in which several parameters may be changed simultaneously in order to reach a specific goal. They are useful in determining the optimal mix of products, efficient organizing of human resources, in solving the problems of transport and distribution, efficient allocation of financial resources, financial planning. (Bălan and Dumitru, 2011).

Microsoft Excel software has the status of a standard in spreadsheet software. It is integrated with Microsoft Office software so that the data and the processing results can be transferred between all components of Microsoft Office software, which is an important advantage in creating various reports.

### 3. The premises of the research

In the performed research we started from the following hypothesis:

- Companies in Bihor County are using Microsoft Excel software.
- Companies in Bihor County are using Microsoft Excel software in the marketing activities.
- Companies in Bihor County are using data analysis tools offered by Microsoft Excel software in the marketing activities.

### 4. The research methodology

Companies analyzed in this research were selected from a database organized at national level, which can be accessed online at [www.listafirme.ro](http://www.listafirme.ro) (accessed on October, 2012). The database which we used has a search engine that allows searches of companies in terms of location and filtering the results by number of employees. This way it was possible to make a list of companies in Bihor County filtered by size, such as: up to 10 employees, between 10 and 50 employees, more than 50 employees.

We randomly selected from this database 1200 companies, 400 of each category. To collect the necessary information we used questionnaires. The first question in the questionnaire was if they use Microsoft Excel software in their activity. If the answer was affirmative, they were asked to respond to the questions which follow. A number of 936 of the total questionnaires were returned and used for analysis, resulting a response rate of 78%. Response rate for each category considered is presented in the Table1:

**Table 1:** Response rate for each category considered

<b>Response rate / Company's size</b>	
up to 10 employees	67,25 %
between 10 and 50 employees	76,50%
with more than 50 employees	90,25 %

The questions were grouped as follows:

- Questions related to the company's size.  
The companies were structured as follows:
  - up to 10 employees
  - between 10 and 50 employees
  - with more than 50 employees
- Questions related to existence of a marketing department in company's organizational structure and employees number.
- Questions related to marketing activities of the company.
- Questions related to department in which the employee in charge with marketing activities is hired (if the company does not have a marketing department) and position which he holds in the company.
- Questions related to the complexity of the reports needed in marketing activity.
- Questions related to the analysis activity of the economic data.

- Questions related to the graduated domain, informatics studies attended and software application known by the employee in charge with marketing activity.
- Questions related to the software applications they currently use in marketing activities.
- Questions related to how much Microsoft Excel software is used in organizing, processing, presenting and analyzing data.
- Questions related to the tools which they use for organizing, processing and analyzing data offered by Microsoft Excel software and used in marketing activities.
- Questions related to the importance given by the senior management in improving the employees' knowledge in using Microsoft Excel software.

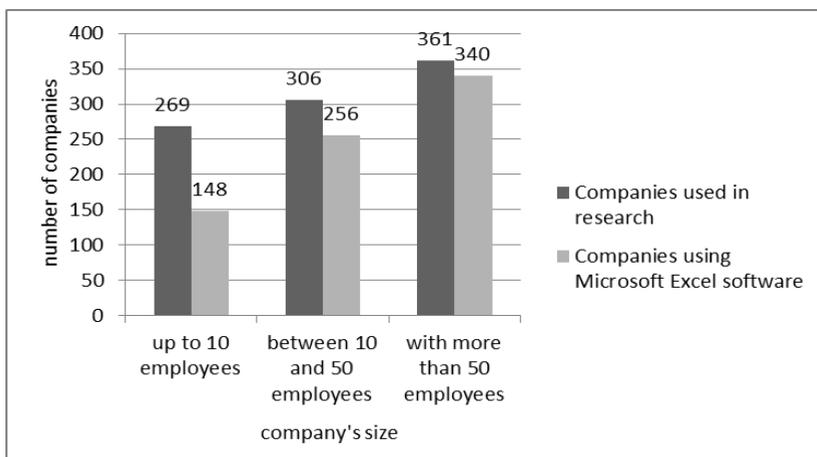
### 5. Data analysis and interpretation

A number of 744 questionnaires have confirmed the fact that companies use Microsoft Excel software. Distribution for each category considered is presented in Table2:

**Table 2:** Usage of Microsoft Excel software, depending on company size

Number of companies/ Company's size	N	Total number of companies	Companies using Microsoft Excel software
up to 10 employees	%	269	148 55,02
between 10 and 50 employees	%	306	256 83,66
with more than 50 employees	%	361	340 94,18

For a visual presentation of the data and better understand their significance we represented the data as a chart, in Figure 1:



**Figure 1:** Usage of Microsoft Excel software by companies

Regarding the first hypothesis, Table1 shows that Microsoft Excel software is used to a lesser extent in small companies with less than 10 employees and to a greater extent in other.

Therefore, many of the small companies with less than 10 employees (44,98%), neither they give enough importance in data organizing, data processing and analysis, nor their employees know how to use Microsoft Excel.

Regarding the last two hypotheses, collected data showed that:

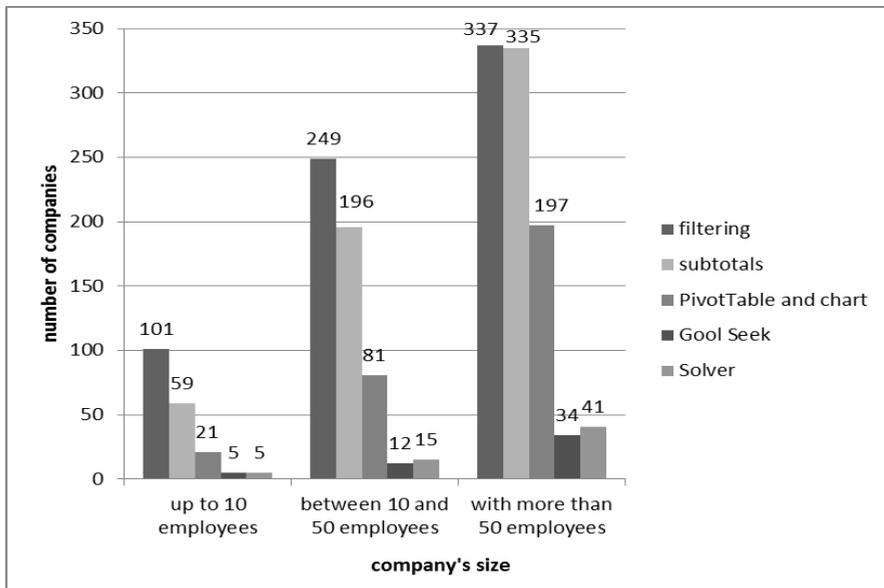
- In 31,76% of the companies with less than 10 employees Microsoft Excel software is used mainly in data inventory using spreadsheet forms, due to lack of knowledge in how to use Microsoft Excel software. Only simple formulas are used, like sorting and usual functions (such as sum, average, count, max, min). Using the results, a person can make a decision, usually regarding to what to do in the upcoming month, based on the current data, compared to the data acquired in the previous month.
- Only 39,86% of the companies with less than 10 employees and 76,56% of the companies with a number of employees between 10 and 50 use subtotal function. By using the subtotal function, detailed information such as lists of expenses, individual sales records, number of articles in each type of inventory could be used effectively in the decision making process.
- Pivot tables and charts are used to a greater extent in companies with more than 50 employees (57,94%). Therefore, we noticed that still too few companies give importance in organizing, processing and presenting data in a manner which allows effective marketing decisions.  
PivotTables ensure great flexibility in data presentation. They allow dynamic summaries for efficient data analysis. Stored data can be organized in multiple spreadsheets. All required details can be displayed or hidden. The way in which data is presented can be changed easily, by changing either the configuration or the level of the details displayed. A chart creates a visual representation of the data and their relations with other data, which allows easy understanding of their significance. Trend line to a data series, such as, for example, monthly sales during the year, can be calculated and used to forecast future sales. Similar data series, but represented on different numeric scales, such as, for example, sales volume (in pieces) and price (in euro/piece) can be displayed on the same chart, using a secondary axis. Thus, it is possible to relate the sales volume and selling price in a direct and significant manner.
- Very few companies use data analysis tools offered by Microsoft Excel software. This is because employees have only basic knowledge in using Microsoft Excel.
- Companies that use Goal Seek tool, also use Solver tool, which was expected.
- Most companies don't give proper consideration to data analysis tools offered by Microsoft Excel software. Their use could bring many benefits to companies.

Results are synthesized in the Table3.

**Table 3:** Usage of tools offered by Microsoft Excel software in the marketing activities, depending on company size

Instruments used/ Company's size	N	Filtering	Subtotals	PivotTables and chart	Goal Seek	Solver
up to 10 employees	%	101 68,24	59 39,86	21 14,19	5 3,38	5 3,38
between 10 and 50 employees	%	249 97,26	196 76,56	81 31,64	12 4,82	15 6,02
with more than 50 employees	%	337 99,12	335 98,53	197 57,94	34 10,09	41 12,17
Total	%	687 92,34	590 79,30	299 40,19	51 6,85	61 8,20

For a visual presentation of the data and better understanding of their significance, the data is represented as a chart, in Figure 2:



**Figure 2:** Usage of data analysis tools by companies

## 6. Conclusions

Microsoft Excel software offers a number of powerful tools and techniques that can be used for organizing, processing, modelling, analysis and presentation of data. Conducted research shows that Microsoft Excel software is used, in most cases, at its basic techniques level. This is because employees have only basic knowledge in using Microsoft Excel. Tools for organizing and statistical data processing, for presentation and assessment of trends and relationships between data, for data analysis are known and used in a lesser extent. Few of the respondents use tools for creating scenarios in decision making.

Microsoft Excel software is used a lot in marketing activities of companies in Bihor County, but data analysis tools it provides are used too little. Collected and stored data are not used to their real extent. This way, companies do not have information that could help them to better understand customer behaviour and market products.

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# STUDY REGARDING THE CHARACTERISTICS OF THE BIHOR COUNTY COMPANIES' WEBSITES

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**Abstract:** *Number of Internet users who access the websites of different companies to find information and to buy online is growing. In these conditions, the companies to be able to communicate the informational message, promotional message or intention to initiate trading exchange, must be present in the virtual environment. The company's website can be used as a tool in marketing strategy, as a means of developing identity or increasing the brand exposure, as a support for communication with potential clients or as a means for market research. The website, as an interface between customers and company, must answer as many questions as possible and it must trigger the impulse that motivates consumers to return and buy products/services from the company. This paper contains a study of the websites belonging to 330 companies from the Bihor County. In the study conducted were considered companies in Bihor County that are present in the virtual environment through websites. The elements that have been analysed are the measure and the manner in which companies use the online environment to communicate their identity. The websites are analysed in terms of their design, in terms of the way it influences the experience in visualising the site and in terms of the design elements used to facilitate navigability, to encourage interaction between the visitor and the company, to prove credibility, accuracy and valability of the information and to demonstrate that the information is presented in an objective manner. We considered the following criteria for evaluation of sites: the presence of information about the organization such as general information, information about products and means of distribution, company location; the structure used to present the information on the website home page, the navigability elements, the elements to prove credibility, the quality level of the company products, the presence and percentage of graphics, applying the design principles, the presence of those elements that ensure interaction with the website visitors.*

**Keywords:** *website; virtual environment; design elements; design principles; marketing strategy*

**JEL classification:** *L81; C85*

## **1. Introduction**

An increasing number of users of Internet use to search for information about products and services and to buying products or services. In these circumstances companies should be present in the online environment to initiate a dialogue with them. Must be present in the online environment to be able to communicate the informational message, promotional message or intention to initiate commercial exchange (Gay, Charlesworth and Esen, 2009).

Companies use websites for different purposes: to communicate information about the company, to promote products or services, to provide potential customers the opportunity to purchase these products online, to interact with them (Charlesworth, 2009). Website of a company ensure its constant presence and can be used as a tool in marketing strategy, can be used as a means of developing identity and increase brand exposure, as support for relationships with potential buyers or as a means of achieving market research (Armstrong and Kotler 2010). But for the website to fulfill the purpose for which it was made must give due consideration to certain aspects.

In the study conducted we watched those elements of websites, which in combination, can lead to obtaining a successful website (McClurg-Genevese, 2005). Website design must consider customer requirements. Some interactive features of the website, such as ease of navigation, ease of product selection they can attract customers (McClurg-Genevese, 2005)). But the elements that confer trust, privacy, security are decisive for triggering the buying process.

## 2. Research methodology

The websites analyzed in the research conducted were selected from a database composed at national level (*www.listafirme.ro*, accessed september, 2012). The database used has a search engine that allows searches based on criteria such as name, location and domain, advanced searches based on the number of employees, turnover, profit, filtering of results based on: phone number or fax, e-mail, website, etc.

The websites selection had three stages:

- Selecting companies from the Bihor county. Grouping companies by type of activity carried out in three categories: manufacturing industry, trade and services. Share of companies by type of activity carried out is presented in Table1

**Table 1:** Percentage of firms according to the type of activity carried

<b>Activity</b>	<b>Percent</b>
Manufacturing industry	10,98%
Commerce	10,04%
Services	78,98%
<b>TOTAL</b>	<b>100%</b>

- Selecting those companies from the Bihor county that have websites. The result is a number of 1553 companies with websites.
- Selecting websites for analysis. 330 websites were selected, taking into account the percentages in Table 1. We obtained the situation presented in Table 2.

**Table 2.** The number of company websites, selected depending on the type of company activity

<b>Activity</b>	<b>Number of websites</b>	<b>Percent</b>
Manufacturing industry	33	10%
Commerce	33	10%
Services	264	80%
<b>TOTAL</b>	<b>330</b>	<b>100%</b>

### 3. Website evaluation criteria

We considered the following criteria for evaluation of sites:

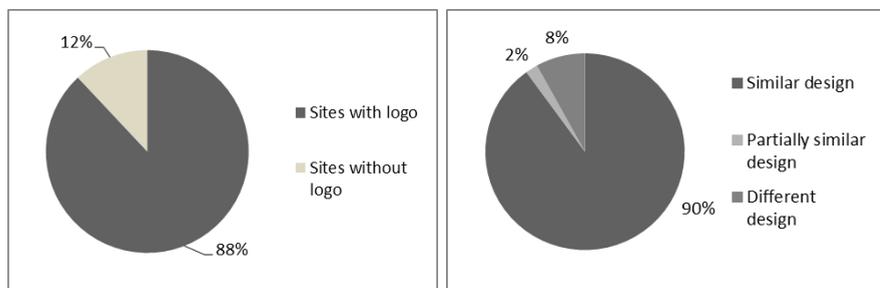
1. The presence of the following types of information about the organization: general information, information about products and means of distribution, company location.
2. The structure used to present the information on the website home page: framing, horizontal or vertical page segmentation, presence of the scroll bar, proportion between text and image/animation.
3. The navigability elements: page number, existence of an internal search engine, whose importance is strongly connected to the complexity of the site, options to display the text in multiple languages.
4. Elements that demonstrate credibility, the quality level of the company products. This category includes those elements that prove the existence and competence of the company and its employees in the domain activity: portfolio, partners, independent quality certification, company history, organisational chart and resumes of the most important employees
5. The presence and percentage of graphics: images, video and animations. The right proportion between text and visual elements has a great influence on the general aspect of the web page (Williams and Tollet 2002), the purpose of the latter being to animate the „dead zones” in the page or to create contrast.
6. Colour scheme and font, as well as applying the design principles: alignment, proximity, repetition and contrast (Fong-Gong and Cheih-Ying, 2009). All these design concepts refer to elements in a web page and how they interact in order to create a pleasing overall appearance. (Beaird, 2011).
7. The presence of those elements that ensure interaction with the website visitors: newsletter, comment or message section incorporated in the website, online purchase option, instant messaging IDs, blogs, social networking contact options, useful links to websites with additional information, product advertising outside the website domain, through social networks, public websites, entertainment or informative websites, generating the economic exchange or any other type of exchange that is included in the company activity domain or which is complementary to it.

#### 4. Data analysis and interpretation

The data related to the analysed websites were separated into two groups (general information and design related information) and were organised into an Excel table. After data analysis we concluded that:

1. Regarding the appearance (the identity elements, colour scheme, layout type, usage of photography, video or other graphic elements, scroll bar and the percentage between text and graphics were all taken into consideration):

- A percent of 12% of the companies did not have identity elements such as logos and taglines. In the case of the other, the majority of them have used de logo design to generate a consistent general appearance, by copying and repeating the colour scheme, the font and the font graphics (Figure 1).
- Just 2% websites have a partially similar design to their logo, while 8% other websites have a design that is completely different, thus isolating the logo from the other site elements (Figure 1). As a conclusion, there still are companies that do not use the basic tools to identify themselves in front of the public. The logos are placed on the page by following the convention which consists of placing important site elements: logo, menu and other navigability assistance tools on the top part of the page, in the first frame.



**Figure 1:** The usage of the basic identity elements

- As far as the website domain names are concerned, two different tendencies have been noticed: usage of the company registered name as website domain name (71% of the companies) and of a descriptive name, different from the official one.
- In the case of the home page structure, the most popular layouts are the ones with vertical framing, which help organise the information in columns. From the total number of websites, 91% use this type of structure, 7% have cut the pages on horizontal frames and 2% are unstructured. Sectioning the pages in frames is a simple way to structure the pieces of information depending on the group they belong to, and to help the visitors in finding the information they are looking for. Sectioning the page in a number of frames higher than two columns creates a vague appearance; the visitors are overwhelmed by the quantity of information they are being offered and thus they don't succeed in separating the important information from the additional one, destined to provide further explanation and detail concerning the products. In this case most of the websites use two columns, the percentage of the websites that have one and three columns respectively, being equal.

- The position of the web page on the screen is of three types: centered, on the left and on the right of the screen. The most used of the three is the centered position (76% of the websites) because this gives the best visibility to the content.
- The scroll bar is present on the home page in 30% of the cases. These companies want to assist the visitors by providing as many pieces of information as possible from the first click. This decision is highly debated: on one side the Internet users don't have to make an effort to search for information inside the site, while on the other side the home page becomes crowded, thus making it difficult for the visitors to track down the information they need. The utility of the scroll bar on the home page, from the visitors perspective, depends on the type of site. News websites, portals and online shops have a good justification in the large amount of information. Meanwhile the private companies websites, especially the ones with a presentation purpose, provide a much smaller amount of information, that allows them to split it on more web pages, to encourage the exploratory side of the visitors.
- As far as the type of content found on the home page is concerned, in 41% of the cases the main content is text, in 32% of the cases the proportion between text and images is balanced and in 27% on the cases the main content are images or other types of graphics. The websites that have a high amount of text are also the ones that are missing visual and audio elements. By using text and visual elements simultaneously and on the same page, the contrast that breaks the flatness given by the sole use of text is given. The most frequently found is photography (67% of the websites), followed by animation (43% of the websites), video (12% of the websites) and audio (6% of the websites). Thereby there are two types of websites to be observed: those which use only text and those which use all forms of content. The latter exposes the companies to the danger of promoting themselves through a „noisy” design.
- The general quality level of the visual appearance is measured with the help of the following elements: alignment, repetition, contrast and proximity. The alignment refers to the position of the elements on the page but also to the position of these elements towards each other. Most websites have the alignment of the text on the left while the images are centered. 18% of them have a correct alignment given by the use of frames and of graphics to create the right position on the page for the content. 22% of the websites have problems regarding alignment, in a way that some of them are inconsistent while others are misaligned.
- Most of the websites use colours as the main means of creating contrast (71% of the websites), some of these by mixing colour with graphics (32% of the websites). Texture and spacing are used in few cases, and 20% of all the websites do not use the contrast principle in their design. As far as repetition is concerned, the situation presents itself in a better light. 69% of the websites have distinctive layout, used for all the site pages.

2. Concerning the technical elements there were taken into consideration those elements which are considered to be of direct and large influence on the visitors' experience on the websites: the presence of meta-tags, the presence of dynamic content and the loading speed on the website:

- A percent of 20% of the analysed websites do not use meta-tags. A percent of 71% use them correctly, while 9% have an insufficient number of key-words (less than 10) to describe the content of the websites.
- The loading speed is one of the first elements that gets into contact with the visitors, giving them the opportunity to get a first impression on the website, from the point of view of the time it takes for the site to load. In most of the cases the loading speed is satisfactory.

3. Concerning the typography elements (there were taken into consideration those elements that have a considerable influence on the ease with which the visitors read the content on the pages: type of font, size, diacritics, text contrast, typing errors):

- A percent of 10% of the websites have typing errors, many of them on the home page.
- The diacritics are used only in 4% of the cases.
- The most frequently used fonts are the standard ones; italic fonts are used in a very few cases, only for titles.
- The contrast on the page is accomplished through alternating the size and styles of the fonts. In many cases different font sizes are combined with different styles, in order to emphasize the text areas or key words in a paragraph. The result is counterproductive for the visitors, whose attention is taken away from the message by the appearance of the text.

4. Concerning the information content (there were taken into consideration the accuracy and validity of the information, the credibility and the objectivity):

- From the objectivity point of view, the analysis of the content followed its purpose: to inform and to advertise. Most of the websites use both types of content, but depending on the case, it is either the informative or the advertising side that prevails. 24% of the websites use equally informative and advertising content.
- The objective nature of the information can be reinforced by proving its accuracy through independent sources: clients or organisations specialised in independent evaluation. The existence of such elements was followed: references, links leading to independent evaluation websites and, insofar as the company activity allows it, free samples of the products. Despite the importance these elements have in persuading the consumers to purchase, only 30% of the websites have included them in their web pages. 48% of these websites have on display on their pages lists with important clients, messages from clients concerning the product experiences or guestbooks as references. 54% of these post links to redirect visitors to independent, specialised evaluation websites, such as websites that rate service quality of tourism companies, and 6% websites offer the visitors the possibility to test the products, taking into consideration that in each case the nature of the products imposes limitations on this marketing instrument.
- The validity criterion takes into consideration the frequency with which the information on the websites is being updated. The difference between the online product description and the real one affects consumer perception on

the companies professional level and it diminishes their trust towards information given through the virtual environment. From the total number of companies, only 29% have regularly updated their websites. Most of the modifications are found in the promotional offers section, followed by the news and articles section, portfolio pages and financial information section.

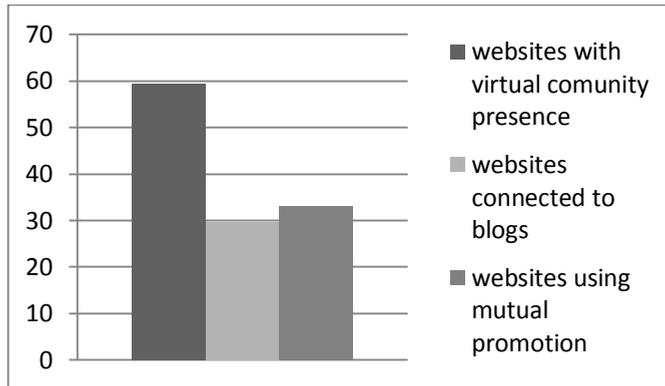
- The credibility elements have the goal to prove the existence and competence of a company in its field. Offering evidence to support the actual existence of the company headquarters, its branches, workstations or points of sale increases consumer trust and helps them locate the geographic area of the company. 32% of the websites offer the visitors location maps. The competence is proven with photographs, quality certificates, through brand association with clients, business partners, other products and sponsored events, through company history or its positive financial results. Most of the websites have posted photographs (of the offices, products or the manufacturing process, as well as others), 22% websites display quality certificates or operating permits, 29% websites have at least lists with the most important business partners and clients, 14% site have resumes of their most important employees while a lot less offer the company history and financial information.

5. Concerning the interaction and transaction elements:

- A percent of 72% of the websites have this type of elements, and from this group, 28% were classified into this category only because of the presence of contact forms, the most basic tools for online interaction.
- A percent of 29% of the websites allow online commercial exchange by posting links to online shops, such as companies trading in commerce or some services companies, by placing online orders, by allowing online appointments or by initiating consultancy dialogue with the clients, as it is the case with consultancy firms.
- A percent of 8% of the websites redirect visitors to virtual shops, while 14% of them give updates through newsletters and blogs and 16% of the websites communicate with public virtual spaces such as social networks and instant messaging programs. The latter category allows the exchange of information between the companies and users and it creates a community of visitors that have showed a strong interest in the company.

6. Concerning the advertisement elements (there were taken into consideration advertisements through websites or virtual community programs, connections between the website and blogs with information regarding the companies economic field and link exchange between companies that belong to complementary fields), as shown in Figure 2:

- A percent of 18% of the websites have a virtual community presence
- A percent of 9% of the website are connected to blogs
- A percent of 10% of the websites made arrangements with other companies in order to mutually promote themselves through link exchange. This marketing tool uses banners placed on the right side or at the bottom of the home page, their objective being to redirect visitors interested in a certain company or a type of service to the websites of other companies or products that are complementary to the former.



**Figure 2:** The usage of advertisement elements

## 5. Conclusions

As far as the appearance is concerned, in specialised works the idea of using a traditional layout versus an alternative layout, with an original structure, is highly debated (Skal, 2009), (Scott, 2010). On one side it is advisable to follow design conventions that Internet visitors are accustomed to, while some studies show they are adaptable to new layout schemes, provided that these schemes are consistent throughout the site.

The conducted study shows that there is an approximately equal proportion between websites with modern graphics that neglect the interests of visitors as far as the information they seek is concerned and websites with basic graphics that contain relevant information for visitors. There are two trends to be observed in the site design: the utilitarian trend, which believes information content to be more important than the graphics, and the aesthetic trend of manipulating the way information is presented in elaborate graphical shapes. One of the explanations for this could be that target consumers are a guiding criterion in designing the site. Thus, if a company's target consumers are conservative in nature, it will choose the utilitarian trend, while if the target consumers are innovative the website will have distinct design.

The site, as an interface between customers and company, must answer to as many questions as possible and it must trigger the impulse that motivates consumers to return and buy products/services from the company. The low number of websites that have interaction elements (only a half, given the importance of interaction with the public in the virtual environment, and excluding those websites that use only with basic contact forms) can be explained through the perpetuation of the idea that only firms in certain fields (trade companies – virtual shops; firms with a high frequency of new product release - newsletters) can use these tools.

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